



## **Analysis of the Indo-Pacific Outlook and Impact of the AUKUS Tripartite Pact**

**Posma Sariguna Johnson Kennedy**

Universitas Pertahanan Indonesia, Jakarta

**Abstract:** Competition for influence/hegemony between the United States and China in the Indo-Pacific is, among others, in the context of controlling the trade market and the supply of natural resources/energy in the region. It is marked by a change in the United States strategy to move its military power center to the Asia Pacific region, with the excuse of increasing/reviving economic and military power. This study aims to examine the tensions in the Indo-Pacific that gave rise to the AUKUS trilateral pact and its impact on countries in the Indo-Pacific. The research method used in this research is document-based qualitative research or literature-based qualitative research. Indo-Pacific countries must realize that the worsening of Australia-China relations and increasing Chinese military activities in the South China Sea are signs. It signifies that the regional security reality is getting worse and requires real action through material balance, both economic and military. AUKUS is a manifestation of America's multilateral approach to maintaining its superiority in the region and thwarting China's ambition to become the most powerful country that overrides common interests in the region. So the formation of AUKUS can be seen as the embodiment of an international institution. It was created in response to the national interests of many countries in the region.

**Keywords:** Indo-Pacific, AUKUS, China, America, Australia, United Kingdom.

### **INTRODUCTION**

Asia's population is almost 60% of the world's population. The economy that continues to grow and develop attracts Western countries. With a population of 1.4 billion, China and India 1.3 billion, the countries that are members of ASEAN reach 650 million. Japan, North Korea, South Korea, Pakistan, Bangladesh, Central Asian countries, and Russia, of course, are market potential for the United States, Europe, and countries in Asia, including China, India, South Korea, and Japan, including countries that are members of ASEAN. (Sutrisno & Meirinaldi, 2020)

The Asian region has considerable economic potential as a market for industrial production, food, and financial services, producing production food, and an economy that continues to grow. This area is an attraction for the United States and European countries to market their products and financial services as well as a place to meet the goods needed by the United States and Western European countries. The strategic and important position from the geoeconomic, geostrategic, and geopolitical aspects becomes contested. Alternatively, it wants to dominate in controlling/conquering influence in Asia and the Pacific for economic and political interests.

Since the end of World War II, the United States has controlled influence over Japan, South Korea, India, the Philippines, Thailand, including Indonesia, especially since the failure of the G30S/PKI rebellion. From a political point of view, America's military involvement in various regions, whether in the Middle East, Europe, and Asia Pacific, has not changed much. The United States policy, which tends to be protectionist, has caused reactions from various world leaders. It is reflected in the attitude of European leaders at the World Economic Forum in Davos, Switzerland, on January 25, 2018. (Sutrisno & Meirinaldi, 2020)

The increasing escalation of tension in relations between the United States and China in the Asia Pacific region has also become a development situation and concern for countries around the region. In particular, China's claim to the South China Sea is an area/area of traditional Chinese fisheries heritage. It is increasing dynamics/tensions in the region between China and Vietnam, Thailand, the Philippines, and Malaysia, as well as in the East China Sea, which has created diplomatic tensions between China and Japan, with South Korea.

It shows the dynamics and strategic role of the Asia and Pacific region. In terms of geoeconomic, geopolitical, and geostrategic aspects.

The competition for influence/hegemony between the United States and China is also in the context of controlling the trade market and the supply of natural/energy resources in the region. It is marked by a change in the United States' strategy to reduce/transfer its military power centers from Europe, Iraq, and Afghanistan to the Asia Pacific region on the grounds of increasing/reviving China's economic and military power. China is aggressively introducing the Belt and Road Initiative (BRI) or One Belt One Route (OBOR) program to develop trade through land and sea links. For example, China developed the Silk Road that connected Chinese cities with Central Asian countries, Russia and Western Europe. OBOR connects sea transportation routes connecting China, Vietnam, Laos, Myanmar, Thailand, Malaysia, the Philippines, Indonesia, Sri Lanka, and India and continues to Africa.

Several Asian countries see China's steps in carrying out maritime and land programs through BRI from the "Geopolitical" aspect as an effort/step by the PRC to increase the "bargaining position and political leverage" over countries in the Asia Pacific region. Several countries see the BRI mega project as a step/strategy for China to increase its geopolitical and geostrategic influence in Asia, Europe, and Africa. From the explanation, the study looks at the Indo-Pacific tensions that gave rise to the AUKUS trilateral pact and its impact on countries in the Indo-Pacific.

## LITERATURE REVIEW

### Indo-Pacific Region Ideas (Pangestu, 2021)

The "Indo-Pacific region merges the Indian Ocean and Pacific Ocean regions. Geographically, the Indo-Pacific region is an area that stretches from the eastern part of the Indian Ocean to the western Pacific Ocean and is connected to the Malacca Strait. The Indo-Pacific has become the center of maritime geopolitical, security, trade, and environmental activities (Passarelli, 2014). There are at least more than 50 countries in the Indo-Pacific ring. The Indian Ocean, the third largest ocean in the world (after the Pacific and Atlantic), occupies about 20 percent of the Earth's Earth'sface, covering a total area of 73.56 million square miles (Michel & Stickler, 2012). The Indian Ocean region contains many minerals, oil, and natural gas. The states of the Indian Ocean region have more than two-thirds of the world's known oil reserves, so the Indian Ocean region is believed to be rich in energy reserves (Albert, 2016). At least 35 percent of the world's gas reserves, 60 percent of uranium, 40 percent of gold, 80 percent of all diamond reserves, and large amounts of various other mineral substances (Future Directions International, 2012).

Most Indian Ocean states continue to export raw materials and import manufactured goods produced elsewhere, with a few exceptions, such as Australia, India, and South Africa. Oil dominates trade, as the Indian Ocean has become an important route for transporting crude oil to Europe, North America, and East Asia. Other major commodities include iron, coal, rubber, and tea. Processed seafood has emerged as a major export item from littoral countries. Moreover, tourism has become increasingly important on many islands (Verlaan, Morgan, & Kanayev, 2020). The Indian Ocean provides important international shipping routes. Oman, Yemen, Somalia, India, Pakistan, Sri Lanka, Bangladesh, Myanmar, and Indonesia are coastal countries that surround the Indian Ocean (Tertia & Perwita, 2018). Shipping in the Indian Ocean can be divided into dhows, dry cargo carriers, and tankers.

The Pacific Ocean has an area of about 63.8 million square miles (165.25 million square km). The Pacific Ocean is much wider than the Indian and Atlantic oceans. In addition, the area is more than just the earth's land surface. The TEarthcific Ocean stretches from the coast of Antarctica to the Bering Strait to 135° latitude, about 15,600 miles (15,500 km). Its greatest elongated area is about 19,000 miles (19,300 km) along latitude 5°N, between the coasts of Colombia in South America and the Malay Peninsula in Asia. The average depth is 14,040 feet (4,280 meters), and the greatest known depth is 36,201 feet (11,034 meters) at the Mariana Trench (Cotter, Bardach, & Morgan, 2019).

Since the mid-20th century, there has been tremendous growth in trade between the western Pacific Rim. Especially China, Japan, South Korea, Taiwan, and North America, and not behind the United States. Trade has also developed between North America and Southeast Asian countries such as Singapore, Thailand,



Malaysia, the Philippines, and Indonesia. In the western Pacific region, trade is increasing between Japan and South Korea (Cotter, Bardach, & Morgan, 2019). As such, the Pacific Ocean supports some of the most important trade routes in the world.”



Figure 1. Map of the Indo-Pacific (crsreports, 2022)

The Indo-Pacific idea has existed since the end of the 20th century. After World War II, in the 1960s, Asia-Pacific dominated the Asian conception. "It is generally understood as the region linking Northeast and Southeast Asia with Oceania (and therefore Australia) and the Americas. A large part of the purpose of this idea is to reflect and strengthen the important strategic and economic role of the U.S. in Asia, as well as the success of East Asian industrialized countries as U.S. trading partners. Asia-Pacific reached a new level of relevance and institutionalization in the late 1980s with the establishment of the Asia-Pacific Economic Cooperation (APEC) process. The Asia-Pacific concept began to falter with two factors that emerged in the 1990s. First, India's rise as a substantial economic and military power with interests beyond South Asia. Second, the increasing connection between the economic powers of East Asia and the Indian Ocean region related mainly to the demand for energy and other resources" (Medcalf, 2018).

The Indo-Pacific region did not form by itself. This concept was first coined by Gurpreet S. Khurana 2007 (Khurana, 2007), "An executive director of the National Maritime Foundation in India and has been a Captain of the Indian Navy, in his article entitled "Security of Sea Lines: Prospect for India-Japan. Cooperation" (Kuo, 2018). The term Indo-Pacific originated from a geographical concept combined with an economic perspective. With the existence of tremendous geoeconomic opportunities as well as crucial security challenges. Where not only for Asia but also for the whole world. Then a single regional construction was built, namely the Indo-Pacific. The description explains the merging of the Indian Ocean and the Western Pacific regions, including the adjacent seas of East Asia and Southeast Asia, into a single regional construction (Khurana, 2017). Then closely related Indo-Pacific is used in the context of geopolitical expressions.

Another important foundation of the Indo-Pacific idea is India's growing prominence. The rise of Indian power in the early 21st century was one of the triggers for Khurana to coin the term Indo-Pacific. In the 1990s, India experienced impressive and significant economic growth. The starting point is an increase in US-India

cooperation in economic trade, security, and defense (Iriawan, 2018). It makes India and the Indian Ocean no longer sidelined in Asian geopolitics. Although the Indo in Indo-Pacific represents the Indian Ocean, not India. Khurana expects India to play a leading role in ensuring a conducive maritime environment for economic growth and development. It was hampered at that time because the construct of view used the phrase Asia-Pacific, so it was inadequate and ambiguous in terms of incorporating India in regional affairs. Another reason for the emergence of the term Indo-Pacific is China's increasing political-military assertiveness, resulting in increased relations between India and Japan since 2006. (Pangestu, 2021)

The concept of Indo-Pacific has not yet gained full acceptance among analysts and regional policymakers as they are still not convinced to embrace the idea fully. However, it is undeniable that the Indo-Pacific concept emerged as a significant strategic space and a theater of geopolitically competing for great powers (Ayres, 2019; Chen, 2018; Khurana, 2017; Natalegawa, 2013). Proponents of the Indo-Pacific concept assume that growing economic relations (De P, 2019) and the need for greater political and security cooperation and coordination require an expansion of the regional concept. According to some people, Indonesia and India are considered important in the regionalization process and were early adopters of the Indo-Pacific idea (Khurana, 2017). One of Indonesia's initiatives toward developing the Indo-Pacific concept is based on a series of security and economic concerns dominated by competition between Beijing and Washington within the Asia-Pacific framework (Natalegawa, 2013). The desire to increase economic growth and prevent China's economic and political dominance is an important driver of the geopolitical construction that Indonesia is trying to play in the region. These factors place significant restrictions on the Indo-Pacific regional integration that Indonesia is trying to promote, in contrast to the understanding of the Indo-Pacific concept in the understanding of other major countries such as the United States" (Ayres, 2019). (Saputra, 2020)

#### South China Sea Conflict (Mas'udi, 2020)

After the success of its ambitious economic program based on economic liberation and internationalization since 1978, China's next agenda is military modernization (Henry, 2016). Since 2009, the U.S. media has reported aggressively on China's aggressive behavior worldwide. Economic progress, followed by military progress, made China even more aggressive. At least, that is what other countries in the Asia-Pacific Region, such as Japan and the United States, have caught or seen. China's aggressiveness is very visible when other countries respond to China's claims about the South China Sea, known as the nine-dash line claim, as well as other territorial disputes involving Japan and South Korea. (Mas'udi, 2020)

In response to the response from other countries, China sent its military to the conflict area instead of using diplomacy. Under its claim to the Spratly Islands, China builds military facilities there. It caused the United States to get involved in responding to China's illegal activities in the disputed area. With its democratic values, the United States considers what China is doing wrong. The United States considers China violating international law under Freedom of Navigation Operations (FONOPs). The United States argues that the construction of these military facilities can destabilize the region because the South China Sea is included in one of the most important trade routes in the world.

The United States responded to China's actions with a rebalancing policy, namely, Pivot to Asia. Through this policy, the United States is committed to remaining economically and militarily engaged in the Asia-Pacific Region. In the economic field. The United States seeks to stay engaged through the Trans-Pacific Partnership (TPP) program. From a military perspective, the United States maintains a naval presence in the South China Sea Region, deepening and strengthening ties with allied countries such as Australia.

Australia is one of the most important countries for the United States because Australia agreed to make Darwin, one of its state capitals, a different military base. Thus, Australia's contribution to the U.S. rebalancing policy is very clear. Moreover, apart from Darwin, Australia also provides access to one of its most important areas, the Pine Gap, in the Northern State as one of the United States military bases engaged in intelligence. "Pine Gap, in Australia's Northern Territory, is home to some of the USA's most important intelligence facilities. It is a base that provides an early warning system for ballistic-missile attacks and intelligence data for U.S. overseas forces (Brown & Bretherton, 2016)."



In 2016, the International Court of Justice ruled on a lawsuit filed by the Philippines over China's claims to Scarborough Shoal. The international court ruled that Scarborough Shoal belongs to the Philippines because the area is still included in the Philippine Exclusive Economic Zone. China has violated international law because of this claim, and China prohibited the Philippines from exploring the Scarborough Shoal area. The international arbitration tribunal held that China had no legal basis for claiming the territory. However, Beijing does not accept the decision of the international court. They believe 99% of the South China Sea area belongs to China. Thus, it can be concluded that the military competition between China and the United States in the South China Sea area will continue and is likely to increase in intensity, especially as China rejects the international decision. (Mas'udi, 2020)

Efforts to ease tensions between China and the Philippines related to the South China Sea issue are aimed at promoting Stability and security in the China Sea to prevent maritime incidents from occurring. The conditions for creating a peaceful area in the China Sea are not followed by China's attitude, which secretly carries out island building and reclamation, building military bases in disputed areas. China's unilateral claim to Natuna waters that the Natuna waters, which China claims as China's traditional Chinese fishing ground since the ancestors of the Chinese people, has also caused problems in relations with Indonesia related to the Natuna Islands. Even China has built a floating nuclear reactor to supply China's needs in the South China Sea. About 20 floating nuclear reactors have been built, especially in the Spratly and Paracel islands. (Sutrisno & Meirinaldi, 2020)

The existence of reclamation and mobile nuclear reactors is considered a step by China to assert that the waters of the South China Sea belong to China, Taiwan, Vietnam, Malaysia, Brunei, and the Philippines. Indonesia is experiencing relationship problems with China related to the waters in the Natuna Islands, related to China's unilateral claim that the Natuna waters in the South China Sea are traditionally Chinese fishing grounds. This strategic route is traversed by ships carrying merchandise worth more than US\$5. Trillion in a year. ASEAN is facing territorial disputes with China in the South China Sea. Due to its strategic location in geopolitics, geoeconomics, and geostrategy terms. (Sutrisno & Meirinaldi, 2020)

The concern of countries in the Indo-Pacific region towards China stems from the country's aggressive actions in several areas, especially in the South China Sea (SCS) waters. It was noted that China did not hesitate to confront other countries (such as the Philippines) and carried out several border violations in the region (e.g., border violations in Indonesia). (Delanova, 2021)

## METHOD

The research method used in this study is document-based qualitative research ( Bary, 2016 ) or literature-based qualitative research (Creswell, 2016). The qualitative research used in this research is deductive, which looks at the relationship between the concept and research data. Deductive research is structured based on a specific analytical framework to explain a certain phenomenon. Secondary data is obtained from literature studies that already exist and have contributed to this research, such as books, journals, articles, documents, and newspapers that have gone through data triangulation so that they can be used to support research purposes (Azwar, 2010).

## DISCUSSION

China-America Rivalry in the South China Sea (Sutrisno & Meirinaldi, 202 )

The South China Sea has created a tug of war-between the two world's economic and military powers between China and the United States in the region. Competition for influence/hegemony and military superiority in the Asia Pacific region between the United States and China has increased tensions in Asia Pacific. The creation of Chinese military bases in the East China Sea on islands disputed with Japan by creating or claiming airspace

or (Airborne Defense Identification Zone/ADIZ) unilaterally China. The presence of military power in the South China Sea has increased tensions in the Asian region with countries in dispute with China.

On the other hand, the United States carries out military surveillance in the Asia Pacific Region, which is increasingly being enhanced. It ensures the presence and political power/control in the Asia Pacific region. Another geopolitical issue is the increasing tension on the Korean Peninsula between North Korea and South Korea, assisted by the United States. The test/launch of an inter-island ballistic missile carried out by North Korea, where North Korea's claim that a nuclear-tipped missile can reach cities in the United States has increased tensions on the Korean peninsula. Among other things, by increasing war games between South Korea and the United States to deal with North Korea's aggressive attitude.

In responding to/responding to North Korea, which continues to test its nuclear missiles, the United States has sent anti-missile interceptor weapons to South Korea. The United States anti-missile defense device, the Terminal High Altitude Area Defense (THAAD), was implemented in South Korea in April 2017. The United States placed its THAAD in South Korea to prevent casualties and other damage if North Korea carried out a missile attack with a tip. Nuclear explosion in South Korea and the United States (island of Hawaii). Besides, it is also to protect the 24,000 United States troops in South Korea.

Due to the United States' policy of placing missiles to intercept North Korean nuclear missiles, China protested and raised objections to the United States' delivery of THAAD weapons to South Korea. Because China considered the THAAD powerful radar threatening the security of China's territory, where United States anti-missile missiles could reach Chinese territory. On the other hand, North Korea also considers the existence of THAAD and American warships to threaten North Korea.

Japan and Britain are the United States' closest allies with a common interest in "restraining influence" China in the South China Sea. The United States, Britain, and Japan are concerned that China could gain control of the trade routes linking Asia with Europe and the United States. China's dispute with Japan over the island of Shinkoku, as well as China's with Vietnam, Taiwan, Malaysia, and the Philippines over the Spratly and Paracel islands in the South China Sea, have added to geopolitical tensions in the Asia Pacific Region. (Republika, 2018)



Figure 2. Locations and chains of Chinese and U.S. military Bases in the Indo-Pacific Region (Red Square, 2021)





On October 2, 2018, China expressed anger at the United States after the U.S. Navy destroyer/fregard USS Decatur sailed near islands claimed by China in the South China Sea. China firmly opposes the operation of the U.S. destroyer, which it considers a "threat" to China's sovereignty. A US official said the U.S. destroyer USS Decatur sailed as far as 12 nautical miles from Gaven Island and Johnson Reefs in the Spratlys on September 30, 2018. China's Ministry of Defense said a Chinese Navy vessel was sent to warn U.S. vessels to leave the waters. China's Ministry of Defense says China has indisputable sovereignty over islands in the South China Sea and beyond. Chinese authorities are angry with the United States because of U.S. sanctions against the Chinese military caused by China buying military equipment from Russia and tensions between China and the United States because of U.S. support for Taiwan. (Republika, 2018a)

China is rising and strong, so it threatens the interests of the United States. The Chinese Navy entered the Pacific Ocean to compete with the U.S. Navy. The Chinese Navy built its aircraft carrier and guided missile destroyer 055D, a 095 SSN nuclear attack submarine, and a 096-SSBN strategic nuclear submarine. Thus, pursuing the U.S. Navy's combat effectiveness and threatening the U.S. Navy's Seventh Pacific Fleet. The United States announced a return to Asia-Pacific policy, whose first task is to contain China and hinder China's development in the Pacific region. U.S. carrier strike groups are dispatched every month for free sailing in the South China Sea. (Red Square, 2021)

China's claim to the South China Sea area is opposed by the U.S. and Southeast Asian countries, such as Vietnam, Malaysia, Indonesia, and the Philippines. However, China and ASEAN agreed on a draft that will form the basis of the Code of Conduct or code of conduct in the South China Sea. With the Code of Conduct, ASEAN and China hope that disputes over claims in the South China Sea can be actively resolved against the two countries, namely China and the United States. (Sutrisno & Meirinaldi, 2020)



Figure 3. China's 095 SSN Nuclear Attack Submarine (Red Square, 2021)

#### The establishment of the AUKUS Triatral Pact

China challenges the prevailing geopolitical order as its Navy is currently the largest in the world (Bahtić, 2021). Having two aircraft carriers and an additional nuclear carrier under construction makes the Chinese

Navy the numerically largest Navy in the world, with an overall combat strength of approximately 355 ships and submarines, including approximately more than 145 major surface combatants (Bahtić, 2021) as a very frightening specter for Australia. China also already has more non-nuclear long-range attack capabilities with a range to hit Australia (Shugart, 2021), so strengthening defense measures is an urgency that must be addressed immediately. Building a new military base network in the South China Sea has strengthened Australia's intention to choose a balancing option with procuring submarines. It is considered effective because China is relatively vulnerable to threats from under the sea. Australia believes investing in the construction of advanced nuclear-powered submarines will match China's power. (Delanova, 2021)

It then prompted Australia to prepare a better force to deal with this aggressiveness and ensure that the sovereignty of other countries could be protected from China's predatory visions. Through a nine-dash line map, which is supported by their ability to use economic coercion and the use of the military to achieve their diplomatic goals (Goodman, 2017). Australia's move was aimed at dampening China's growing military influence and power and in retaliation for aggressive intimidation against Australia, Japan, and Taiwan (McGuirk, 2021).

The AUKUS (Australia, United Kingdom, United States) trilateral defense pact was signed on September 15, 2021, basically intended to balance China's military power with the U.S. to create Stability, security, and peace in the Indo-Pacific region. However, the pact can create a potential conflict escalation in the Indo-Pacific region. Because of the commitment of Australia, Britain, and the U.S. to maintain Stability, security, and peace in the Indo-Pacific region using weapons technology development instruments. This concept is an ancient concept that was commonly used in the cold war era through an arms race that was commonly carried out by the U.S., the Soviet Union, and their proxy countries. (Putro, 2021)

AUKUS can be said as a continuation of America's strategy to counter the development of China's influence in the Indo-Pacific region which is increasingly massive due to several policies of the Asian country. Such as the Nine Dash Line, One China Policy, and Belt and Road Initiative (BRI), to economic and social development, Military significance every year. Previously, America had also strengthened the Quadrilateral Security Dialogue (QUAD) cooperation with members of the US, India, Japan, and Australia, to Five Eyes with members of the U.S., UK, Canada, Australia, and New Zealand, as an effort to ward off China's developments. In the framework of the AUKUS cooperation, it is seen that Australia will become the main supporting force base if a war breaks out between America and China in the Pacific. This situation certainly adds to the region's long list of arms races and stability problems. AUKUS cooperation covers several areas, including intelligence, quantum technology, and cruise missile purchases. However, nuclear-powered submarines are an issue of great concern throughout the world. (Santoso, 2021)

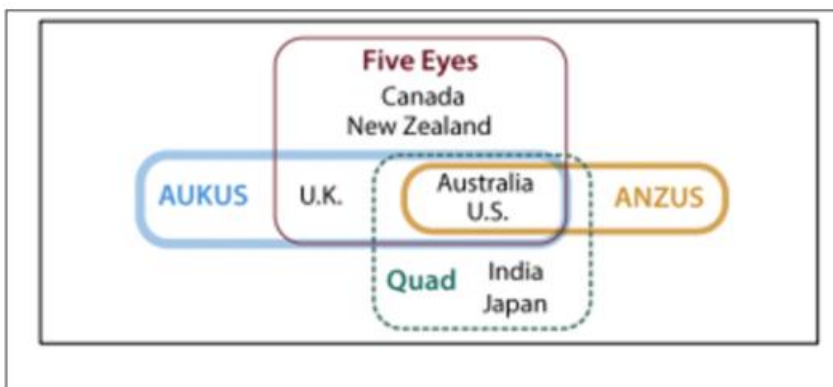


Figure 4. Defense, Intelligence, and Security Groups (crsreports, 2022)

The follow-up to the AUKUS trilateral defense pact in constructing eight nuclear-powered submarines in Australia will add to the negative impact on the security stability of ASEAN, which has previously been a disputed area with China. The development of nuclear-powered submarines through the AUKUS trilateral defense pact has received a lot of criticism and attention from many countries. It, in essence, states that the





AUKUS trilateral defense pact is a provocation that can damage the security stability of the Indo-Pacific region, bring cold war era sentiments, intensify the arms race, and make the Indo-Pacific region a nuclear zone. The submarine has the potential to pass through ASEAN waters, which would violate the Southeast Asia Nuclear Weapon Free Zone (SEANWFZ) treaty agreed upon by ASEAN countries on December 15, 1995. This agreement is a commitment to preserve the Southeast Asia region as a nuclear-free area and other weapons of mass destruction to achieve international peace and security. (Putro, 2021)

America stated that Australia, Britain, and the U.S. would not violate the Nuclear Non-Proliferation Treaty (NPT), signed by the three countries on July 1, 1968. The arms race, as seen from the agreement of the AUKUS trilateral defense pact, was feared to increase tensions between AUKUS with China. It is feared that this could trigger a nuclear war, and it could cause enormous losses for the security of the Indo-Pacific region and even for world peace. As for the NPT, it was agreed that the countries that signed the NPT were committed to limiting the possession of nuclear weapons through nuclear disarmament, nuclear non-proliferation, and the use of nuclear materials for peaceful purposes. (Putro, 2021)

Impact of AUKUS on the Indo-Pacific (Delanova, 2021)

Regional international relations are considered to be something more complicated. Countries are starting to realize the importance of increasing security, which is now becoming a reality in the Indo-Pacific. The term regional is the proximity of the country's geographical conditions in an area with almost the same culture (Väyrynen, 2003). Today's security is also related to other fields besides the military, such as the economy and the environment. Therefore, countries worldwide are aware of the importance of financial protection to prevent the possibility of collapse (Farrell, Hettne, & Langenhove, 2005).

The Indo-Pacific accounts for two-thirds of Gross Domestic Product (GDP) growth because the Indo-Pacific accounts for at least 60 percent of global GDP (The Department of Defense USA, 2019). The fact that the Indo-Pacific has emerged as the world's economic and geopolitical center of gravity, and has made this region a centerpiece in the competition between the U.S. and China, makes the security condition of this region very important. The Indo-Pacific is also required to be alert to the nuclear and conventional threats posed by North Korea as another source of a major power war outbreak. Because of North Korea's long-range missile capabilities and nuclear program and the instability of the Korean Peninsula will have severe strategic, economic, and humanitarian impacts. (Delanova, 2021)

Countries in the Indo-Pacific region are aware that going against China is a decision that hurts their economies. This condition makes the distribution of power in the region unbalanced. From this understanding, it can be considered that AUKUS is a way to ensure power distribution in the Indo-Pacific, not only focusing on the projection of China's military power. By equipping Australia with nuclear-powered attack submarines, Australia is becoming a rival to China. However, with the appropriate economic dimension, AUKUS allies can avoid harming each other as they pursue their economic interests unilaterally. (Delanova, 2021)

The consequences of U.S. economic bilateralism will have a more immediate impact on its allies, within AUKUS, and outside it. China is growing rapidly from local military power to a rising global power. The Chinese army (People's Military Army) is on track to gain capabilities that threaten other countries access to international markets and energy resources—and gaining direct coercive power over the economic well-being of some of their trading partners. Research institute CNAS stated, "For the Indo-Pacific, U.S. alliances and partnerships remain the cornerstone of regional prosperity and security. Demand signals for U.S. regional engagement diplomatically are growing amid rising tensions and shifts in power." (CNAS, 2021).

Collective anxiety about China's influence cannot be avoided considering that apart from placing ownership of the South China Sea. China also shows that the Indian Ocean for them is also part of its ambition to increase its network of military and commercial facilities along the maritime communication line (SLOC) that stretches from mainland China to the Port of Sudan in the Horn of Africa. China's sea lanes pass through various maritime chokepoints, such as the Mandeb Strait, the Malacca Strait, Hormuz, and the Lombok Strait. As well

as other strategic maritime centers in Pakistan, Sri Lanka, Bangladesh, Maldives, and Somalia, the coastal countries of the Indian Ocean, making many countries that have legitimate sovereignty over the territory concerned about the use of violence and economic coercion from China (Santhosh & Noble, 2020). So that the rise of many sea powers in the region is expected to continue to be carried out by other countries in the region that are experiencing improvements in the economy, politics, military, conventional weapons, and modern weapons, etc. (Delanova, 2021)

Belt & Road Initiative, considered to accelerate globalization, provides impetus to increase regional participation among Indo-Pacific countries. It was noted that the new regional order under China's initiative made it able to block the influence of other countries in the region. So this creates ambiguity in the concept and ways regional countries pursue their foreign policy orientations. Most players in this strategic region have various concerns about a promising region for a new maritime century in which all former Asian giants will rise again. Peace will flourish through a balance of trade and better development practices dominated by developments from China. as the country that brought up the initiative, there is no guarantee that China will delay its global ambitions in favor of expanding its regional role. (Sullivan & Brands, 2020). Once again, realism correlates with the Chinese phenomenon where power is used as the ultimate goal to be achieved, even though it comes with various accompanying consequences. (Delanova, 202 )

Indo-Pacific countries also need to realize the worsening of Australia-China relations and the increasing Chinese military activity in the South China Sea and the Taiwan Strait. The regional security reality is getting worse and requires real action through material balance, both economic and military. On the other hand, AUKUS is also a manifestation of the U.S. multilateral approach to maintaining its regional superiority and thwarting China's ambition to become the most powerful country (Phua, 2021 ), which overrides common interests in the region. The change in Australia's plans and strategies is a logical step considering that the United Nations (U.N.). Which is considered to have pushed the country away from war and avoid conflict to promote world peace, has become a false promise (Mearsheimer, 199 ) which, in its development, has not been able to stop the aggressiveness of China. (Delanova, 202 )

The U.S. tendency to stick to the Free and Open Indo-Pacific (FOIP) strategy as the foundation of their policy is a guarantee. They take through the transfer of technology via AUKUS is indeed intended as a good balancing step and revitalization of the idea of an international rules-based order in Indonesia. The Indo-Pacific region. However, look at the difficulty of reaching a united position in certain situations, such as the Uyghur issue in Myanmar. In that case, it illustrates that this region is still in a fragile democratic cycle and is a major obstacle to the U.S. agenda in the region (Phua, 2021).

This condition shows that the realism view, which states, "The attitude of the state will largely be formed from the existing material structure" (Mearsheimer, 1995), is a view that can be understood clearly in the Indo-Pacific security phenomenon. In addition, realists argue that cooperation between countries is like a figment because each country is busy to fulfill power domestically (Jackson & Sorensen, 2013; Tawakal, 2022). The material conditions of the Indo-Pacific countries, which are far behind China's economic and military material possessions, have made many of the existing countries expect a bigger role from the U.S., which is considered to have the capability to ensure security by stopping China. The formation of AUKUS can be seen as the embodiment of an international institution. It was created in response to the national interests of many countries in the region. (Delanova, 2021)

## CONCLUSION

The competition for influence/hegemony between the United States and China is in the context of controlling the trade market and the supply of natural/energy resources in the region. It is marked by a change in the United States' strategy to reduce/transfer its military power centers from Europe, Iraq, and Afghanistan to the Asia Pacific region on the grounds of increasing/reviving China's economic and military power. China is aggressively introducing the Belt and Road Initiative (BRI) or One Belt One Route (OBOR) program to develop trade through land and sea links.

Competition for influence/hegemony and military superiority in the Asia Pacific region between the United States and China has increased tensions in Asia Pacific. The presence of military power in the South China

Sea has increased tensions in the Asian region with countries in dispute with China. On the other hand, the United States carries out military surveillance in the Asia Pacific Region, which is increasingly being enhanced. It ensures the presence and political power/control in the Asia Pacific region.

AUKUS is a continuation of America's strategy to counter the development of China's influence in the Indo-Pacific region. It is increasingly massive due to several policies of the Asian country, such as the Nine Dash Line, One China Policy, and Belt and Road Initiative (BRI), to economic and social development, Military significance every year. Previously, America had also strengthened Quadrilateral Security Dialogue (QUAD) cooperation with members of the US, India, Japan, and Australia, to Five Eyes with members of the U.S., UK, Canada, Australia, and New Zealand, as an effort to ward off China's developments. In the framework of AUKUS cooperation, Australia looks to be the main supporting force base if a war breaks out between America and China in the Pacific.

Indo-Pacific countries need to realize the worsening of Australia-China relations and China's increasing military activity in the South China Sea and the Taiwan Strait. It signs that the regional security reality is getting worse and requires real action through material balance, both economic and military. On the other hand, AUKUS is also a manifestation of America's multilateral approach to maintaining its superiority in the region and thwarting China's ambition to become the most powerful country that overrides common interests in the region. The material conditions of the Indo-Pacific countries, which are far behind China's economic and military material possessions, have made many of the existing countries expect a bigger role from America, which is considered to have the capability to ensure security by stopping China. The formation of AUKUS can be seen as the embodiment of an international institution. It was created to respond to the national interests of many countries in the region.

#### ACKNOWLEDGEMENT

We thank “the Institute for Research and Community Service (LPPM) at the Republic of Indonesian Defense University (RIDU)” and other parties who have helped.

#### REFERENCES

1. Albert, E. (2016). Competition in the Indian Ocean. Diakses pada 6 Mei 2020, Retrieved from Council on Foreign Relations: <https://www.cfr.org/backgrounder/competition-indian-ocean>.
2. Ayres, A. (2019). The U.S. Indo-Pacific Strategy Needs More Indian Ocean. Retrieved from <https://www.cfr.org/expert-brief/us-indo-pacific-strategy-needs-more-indian-ocean>
3. Azwar, S. (2010). Metode Penelitian. Yogyakarta: Pustaka Pelajar.
4. Bahtić, F. (2021). Chinese Navy is the largest Navy in the world, new report shows. Retrieved from Naval Today November 5, 2021: <https://www.navaltoday.com/2021/11/05/chinese-navy-is-thelargest-navy-in-world-new-report-shows/>
5. Bakry, U. S. (2016). Metode Penelitian Hubungan Internasional. Yogyakarta: Pustaka Pelajar.
6. Brown, & Bretherton. (2016). Australian Relations with China and the USA: The Challenge of Grand Strategies. Australian Journal of International Affairs, Vol. 70(1): 1–5.
7. Chen, D. (2018). The Indo-Pacific Strategy: A Background Analysis. Retrieved from <https://www.ispionline.it/it/publicazione/indo-pacific-strategy-background-analysis20714>
8. CNAS. (2021). Regional Alliances and Partnerships. Retrieved from Cnas.org: <https://www.cnas.org/research/indo-pacificsecurity/regional-alliances-and-partnerships>
9. Cotter, CH, Bardach, JE, & Morgan, JR (2019). Pacific Ocean. Retrieved from Encyclopedia Britannica: <https://www.britannica.com/place/Pacific-Ocean>
10. Creswell, J. (2016). Research Design: Qualitative, Quantitative, and Mixed Methods Approach. Yogyakarta: Student Library.

11. crsreports. 2022. AUKUS and Indo-Pacific Security. Congressional Research Service. From: <https://crsreports.congress.gov>
12. De, P. (2019). Navigating the Indo-Pacific Cooperation. Retrieved from <https://economictimes.indiatimes.com/blogs/et-commentary/navigating-the-indopacific-cooperation/>
13. Delanova, MO (2021). The Impact of the Aukus Trilateral Defense Pact on the Indo-Pacific Regional Condition. *Journal of Global Dynamics*, 6(02), 259–285. <https://doi.org/https://doi.org/10.36859/jdg.v6i2.408>
14. Farrell, M., Hettne, B., & Langenhove, L. V. (2005). *Global Politics of Regionalism: Theory and Practice*. London: Pluto Press.
15. Future Directions International. (2012). *Indian Ocean: A Sea of Uncertainty*. In L. G. Luke, & C. O'Loughlin, *Critical Issues in the Indian Ocean Region to 2020*. West Perth: Future Directions International.
16. Goodman, M. P. (2017). *Predatory Economics and the China Challenge*. Retrieved from CSIS: <https://www.csis.org/analysis/predatory-economics-and-chinachallenge>.
17. Henry, K. (2016). Australia in the Asian Century. *Asia & The Pacific Studies*, Vol. 3(2): 132–139.
18. Iriawan, S. (2018). *Diskursus Indo-Pasifik: Hegemoni Amerika, Persaingan Strategis, Hingga Transformasi Geopolitik Kawasan*. Mandala, 284.
19. Jackson R., and Sorensen, G. (2013). *Introduction to International Relations: Theories and Approaches* (5th ed.). United Kingdom: Oxford University Press.
20. Khurana, Gurpreet S. (2007). Security of Sea Lines: Prospects for India–Japan Cooperation. *Strategic Analysis*, 31(1): 139–153. DOI: <https://doi.org/https://doi.org/10.1080/09700160701355485>
21. Khurana, Gurpreet Singh. (2017). *The Indo-Pacific Concept: Retrospect and Prospect*. Retrieved from <http://cimsec.org/indo-pacific-concept-retrospect-prospect/34710>.
22. Kuo, M. A. (2018). The Origin of 'Indo-Pacific' as Geopolitical Construct: Insight from Gurpreet Khurana. Retrieved from *The Diplomat*: <https://thediplomat.com/2018/01/the-origin-of-indo-pacific-as-geopolitical-construct/>
23. Mas'udi SYF. (2020). Analysis of the Australian Alliance's Dilemma. *Journal of PIR: Power in International Relations*, Vol.4(2): 190–200.
24. Mearsheimer, J. J. (1994). False Promise of International Institutions. *International Security Journal* Vol. 19(3):5-49.
25. Mearsheimer, J. J. (1995). A Realist Reply. *International Security Journal* Vol. 20(1): 82-93.
26. Medcalf, R. (2018). *Reimagining Asia: From Asia-Pacific to Indo-Pacific*. In: Rozman, G., Liow, J. (eds) *International Relations and Asia's Southern Tier*. Asan-Palgrave Macmillan Series. Springer, Singapore. [https://doi.org/10.1007/978-981-10-3171-7\\_2](https://doi.org/10.1007/978-981-10-3171-7_2)
27. Michel, D., & Sticklor, R. (2012). *Indian Ocean Rising: Maritime and Security Policy Challenges*. Washington DC: Stimson
28. McGuirk, R. (2021). Australia: Strategic shifts led it to acquire nuclear subs. Retrieved from *Federal News Network* September 16, 2021: <https://federalnewsnetwork.com/world-news/2021/09/australiabuys-us-nuclear-subs-due-to-changed-security-needs/>
29. Natalegawa, M. (2013). An Indonesian perspective on the Indo-Pacific'. Retrieved from the *Jakarta Post*: <https://www.thejakartapost.com/news/2013/05/20/an-indonesian-perspective-indopacific.html>
30. Pangestu, LG, Hikmawan, R., and Fathun, LM (2021). Indonesia's Strategy to Realize the ASEAN Outlook On Indo-Pacific (AOIP) to Create Stability in the Indo-Pacific Region. *Projection: Journal of Social Sciences and Humanities*, Vol. 26(1):1-22.
31. Passarelli, DM (2014). *Sea Change: Evolving Maritime Geopolitics in the Indo-Pacific Region*. Washington DC: Stimson Center.
32. Phua, AT (2021). AUKUS: ASEAN's Hesitant Response. Retrieved from [rsis.edu.sg: https://www.rsis.edu.sg/rsis-publication/rsis/aukus-aseans-hesitant-response/#.YaUIL1VBypo](https://www.rsis.edu.sg/rsis-publication/rsis/aukus-aseans-hesitant-response/#.YaUIL1VBypo)
33. Putro YBYP (2021). *Addressing the Potential for Conflict Escalation in the Indo-Pacific Region as a Impact of the Aukus Agreement*. Secretariat of the Cabinet of the Republic of Indonesia. Retrieved from : <https://setkab.go.id/menyikapi-potensi-escalasi-konflik-di-kawasan-indo-pacific-as-impact-dari-kesehatan-aukus/>



34. Kaur, Jagbir. "Streaming Data Analytics: Challenges and Opportunities." *International Journal of Applied Engineering & Technology*, vol. 5, no. S4, July-August 2023, pp. 10-16. <https://romanpub.com/resources/ijaetv5-s4-july-aug-2023-2.pdf>
35. Pandi Kirupa Kumari Gopalakrishna Pandian, Satyanarayan kanungo, J. K. A. C. P. K. C. (2022). Ethical Considerations in Ai and MI: Bias Detection and Mitigation Strategies. *International Journal on Recent and Innovation Trends in Computing and Communication*, 10(12), 248–253. Retrieved from <https://ijritcc.org/index.php/ijritcc/article/view/10511>
36. Ashok : "Ashok Choppadandi, Jagbir Kaur, Pradeep Kumar Chenchala, Akshay Agarwal, Varun Nakra, Pandi Kirupa Gopalakrishna Pandian, 2021. "Anomaly Detection in Cybersecurity: Leveraging Machine Learning Algorithms" *ESP Journal of Engineering & Technology Advancements* 1(2): 34-41."
37. Kaur, J. (2021). Big Data Visualization Techniques for Decision Support Systems. *Jishu/Journal of Propulsion Technology*, 42(4). <https://propulsiontechjournal.com/index.php/journal/article/view/5701>
38. Ashok : "Choppadandi, A., Kaur, J.,Chenchala, P. K., Nakra, V., & Pandian, P. K. K. G. (2020). Automating ERP Applications for Taxation Compliance using Machine Learning at SAP Labs. *International Journal of Computer Science and Mobile Computing*, 9(12), 103-112. <https://doi.org/10.47760/ijcsmc.2020.v09i12.014>
39. Chenchala, P. K., Choppadandi, A., Kaur, J., Nakra, V., & Pandian, P. K. G. (2020). Predictive Maintenance and Resource Optimization in Inventory Identification Tool Using ML. *International Journal of Open Publication and Exploration*, 8(2), 43-50. <https://ijope.com/index.php/home/article/view/127>
40. Kaur, J., Choppadandi, A., Chenchala, P. K., Nakra, V., & Pandian, P. K. G. (2019). AI Applications in Smart Cities: Experiences from Deploying ML Algorithms for Urban Planning and Resource Optimization. *Tuijin Jishu/Journal of Propulsion Technology*, 40(4), 50-56.
41. Case Studies on Improving User Interaction and Satisfaction using AI-Enabled Chatbots for Customer Service . (2019). *International Journal of Transcontinental Discoveries*, ISSN: 3006-628X, 6(1), 29-34. <https://internatioHappyGuruPurnimasircharansparshnaljournals.org/index.php/ijtd/article/view/98>
42. Kaur, J., Choppadandi, A., Chenchala, P. K., Nakra, V., & Pandian, P. K. G. (2019). Case Studies on Improving User Interaction and Satisfaction using AI-Enabled Chatbots for Customer Service. *International Journal of Transcontinental Discoveries*, 6(1), 29-34. <https://internationaljournals.org/index.php/ijtd/article/view/98>
43. Choppadandi, A., Kaur, J., Chenchala, P. K., Kanungo, S., & Pandian, P. K. K. G. (2019). AI-Driven Customer Relationship Management in PK Salon Management System. *International Journal of Open Publication and Exploration*, 7(2), 28-35. <https://ijope.com/index.php/home/article/view/128>
44. Ashok Choppadandi, Jagbir Kaur, Pradeep Kumar Chenchala, Akshay Agarwal, Varun Nakra, Pandi Kirupa Gopalakrishna Pandian, 2021. "Anomaly Detection in Cybersecurity: Leveraging Machine Learning Algorithms" *ESP Journal of Engineering & Technology Advancements* 1(2): 34-41.
45. Ashok Choppadandi et al, *International Journal of Computer Science and Mobile Computing*, Vol.9 Issue.12, December- 2020, pg. 103-112.
46. Choppadandi, A., Kaur, J., Chenchala, P. K., Nakra, V., & Pandian, P. K. K. G. (2020). Automating ERP Applications for Taxation Compliance using Machine Learning at SAP Labs. *International Journal of Computer Science and Mobile Computing*, 9(12), 103-112. <https://doi.org/10.47760/ijcsmc.2020.v09i12.014>
47. Chenchala, P. K., Choppadandi, A., Kaur, J., Nakra, V., & Pandian, P. K. G. (2020). Predictive Maintenance and Resource Optimization in Inventory Identification Tool Using ML. *International Journal of Open Publication and Exploration*, 8(2), 43-50. <https://ijope.com/index.php/home/article/view/127>
48. AI-Driven Customer Relationship Management in PK Salon Management System. (2019). *International Journal of Open Publication and Exploration*, ISSN: 3006-2853, 7(2), 28-35. <https://ijope.com/index.php/home/article/view/128>



49. Pradeep Kumar Chenchala. (2023). Social Media Sentiment Analysis for Enhancing Demand Forecasting Models Using Machine Learning Models. *International Journal on Recent and Innovation Trends in Computing and Communication*, 11(6), 595–601. Retrieved from <https://www.ijritcc.org/index.php/ijritcc/article/view/10762>
50. Tilala, Mitul, Saigurudatta Pamulaparthivenkata, Abhip Dilip Chawda, and Abhishek Pandurang Benke. "Explore the Technologies and Architectures Enabling Real-Time Data Processing within Healthcare Data Lakes, and How They Facilitate Immediate Clinical Decision-Making and Patient Care Interventions." *European Chemical Bulletin* 11, no. 12 (2022): 4537-4542. <https://doi.org/10.53555/ecb/2022.11.12.425>.
51. Mitul Tilala, Abhip Dilip Chawda, Abhishek Pandurang Benke, Akshay Agarwal. (2022). Regulatory Intelligence: Leveraging Data Analytics for Regulatory Decision-Making. *International Journal of Multidisciplinary Innovation and Research Methodology*, ISSN: 2960-2068, 1(1), 78–83. Retrieved from <https://ijmirm.com/index.php/ijmirm/article/view/77>
52. Mitul Tilala. (2023). Real-Time Data Processing in Healthcare: Architectures and Applications for Immediate Clinical Insights. *International Journal on Recent and Innovation Trends in Computing and Communication*, 11(11), 1119–1125. Retrieved from <https://www.ijritcc.org/index.php/ijritcc/article/view/10629>
53. Tilala, Mitul, and Abhip Dilip Chawda. "Evaluation of Compliance Requirements for Annual Reports in Pharmaceutical Industries." *NeuroQuantology* 18, no. 11 (November 2020): 138-145. <https://doi.org/10.48047/nq.2020.18.11.NQ20244>.
54. Dodda, Suresh, Navin Kamuni, Venkata Sai Mahesh Vuppapapati, Jyothi Swaroop Arlagadda Narasimharaju, and Preetham Vemasani. "AI-driven Personalized Recommendations: Algorithms and Evaluation." *Propulsion Tech Journal* 44, no. 6 (December 1, 2023). <https://propulsionejournal.com/index.php/journal/article/view/5587>
55. Kamuni, Navin, Suresh Dodda, Venkata Sai Mahesh Vuppapapati, Jyothi Swaroop Arlagadda, and Preetham Vemasani. "Advancements in Reinforcement Learning Techniques for Robotics." *Journal of Basic Science and Engineering* 19, no. 1 (2022): 101-111. ISSN: 1005-0930.
56. Dodda, Suresh, Navin Kamuni, Jyothi Swaroop Arlagadda, Venkata Sai Mahesh Vuppapapati, and Preetham Vemasani. "A Survey of Deep Learning Approaches for Natural Language Processing Tasks." *International Journal on Recent and Innovation Trends in Computing and Communication* 9, no. 12 (December 2021): 27-36. ISSN: 2321-8169. <http://www.ijritcc.org>
57. Jigar Shah , Joel lopes , Nitin Prasad , Narendra Narukulla , Venudhar Rao Hajari , Lohith Paripati. (2023). Optimizing Resource Allocation And Scalability In Cloud-Based Machine Learning Models. *Migration Letters*, 20(S12), 1823–1832. Retrieved from <https://migrationletters.com/index.php/ml/article/view/10652>
58. Joel lopes, Arth Dave, Hemanth Swamy, Varun Nakra, & Akshay Agarwal. (2023). Machine Learning Techniques And Predictive Modeling For Retail Inventory Management Systems. *Educational Administration: Theory and Practice*, 29(4), 698–706. <https://doi.org/10.53555/kuey.v29i4.5645>
59. Narukulla, Narendra, Joel Lopes, Venudhar Rao Hajari, Nitin Prasad, and Hemanth Swamy. "Real-Time Data Processing and Predictive Analytics Using Cloud-Based Machine Learning." *Tuijin Jishu/Journal of Propulsion Technology* 42, no. 4 (2021): 91-102.
60. Nitin Prasad. (2022). Security Challenges and Solutions in Cloud-Based Artificial Intelligence and Machine Learning Systems. *International Journal on Recent and Innovation Trends in Computing and Communication*, 10(12), 286–292. Retrieved from <https://www.ijritcc.org/index.php/ijritcc/article/view/10750>
61. Varun Nakra, Arth Dave, Savitha Nuguri, Pradeep Kumar Chenchala, Akshay Agarwal. (2023). Robo-Advisors in Wealth Management: Exploring the Role of AI and ML in Financial Planning. *European Economic Letters (EEL)*, 13(5), 2028–2039. Retrieved from <https://www.eelet.org.uk/index.php/journal/article/view/1514>



62. Varun Nakra. (2023). Enhancing Software Project Management and Task Allocation with AI and Machine Learning. *International Journal on Recent and Innovation Trends in Computing and Communication*, 11(11), 1171–1178. Retrieved from <https://www.ijritcc.org/index.php/ijritcc/article/view/10684>
63. Joel lopes, Arth Dave, Hemanth Swamy, Varun Nakra, & Akshay Agarwal. (2023). Machine Learning Techniques And Predictive Modeling For Retail Inventory Management Systems. *Educational Administration: Theory and Practice*, 29(4), 698–706. <https://doi.org/10.53555/kuey.v29i4.5645>
64. Big Data Analytics using Machine Learning Techniques on Cloud Platforms. (2019). *International Journal of Business Management and Visuals*, ISSN: 3006-2705, 2(2), 54-58. <https://ijbmv.com/index.php/home/article/view/76>
65. Shah, J., Prasad, N., Narukulla, N., Hajari, V. R., & Paripati, L. (2019). Big Data Analytics using Machine Learning Techniques on Cloud Platforms. *International Journal of Business Management and Visuals*, 2(2), 54-58. <https://ijbmv.com/index.php/home/article/view/76>
66. Cygan, Kamil J., Ehdieh Khaledian, Lili Blumenberg, Robert R. Salzler, Darshit Shah, William Olson, Lynn E. Macdonald, Andrew J. Murphy, and Ankur Dhanik. "Rigorous Estimation of Post-Translational Proteasomal Splicing in the Immunoepitome." *bioRxiv* (2021): 1-24. <https://doi.org/10.1101/2021.05.26.445792>
67. Shah, Darshit, Ankur Dhanik, Kamil Cygan, Olav Olsen, William Olson, and Robert Salzler. "Proteogenomics and de novo Sequencing Based Approach for Neoantigen Discovery from the Immunoepitomes of Patient CRC Liver Metastases Using Mass Spectrometry." *The Journal of Immunology* 204, no. 1\_Supplement (2020): 217.16-217.16. American Association of Immunologists.
68. Mahesula, Swetha, Itay Raphael, Rekha Raghunathan, Karan Kalsaria, Venkat Kotagiri, Anjali B. Purkar, Manjushree Anjanappa, Darshit Shah, Vidya Pericherla, Yeshwant Lal Avinash Jadhav, Jonathan A.L. Gelfond, Thomas G. Forsthuber, and William E. Haskins. "Immunoenrichment Microwave & Magnetic (IM2) Proteomics for Quantifying CD47 in the EAE Model of Multiple Sclerosis." *Electrophoresis* 33, no. 24 (2012): 3820-3829. <https://doi.org/10.1002/elps.201200515>.
69. Big Data Analytics using Machine Learning Techniques on Cloud Platforms. (2019). *International Journal of Business Management and Visuals*, ISSN: 3006-2705, 2(2), 54-58. <https://ijbmv.com/index.php/home/article/view/76>
70. Cygan, K. J., Khaledian, E., Blumenberg, L., Salzler, R. R., Shah, D., Olson, W., & ... (2021). Rigorous estimation of post-translational proteasomal splicing in the immunoepitome. *bioRxiv*, 2021.05.26.445792.
71. Mahesula, S., Raphael, I., Raghunathan, R., Kalsaria, K., Kotagiri, V., Purkar, A. B., & ... (2012). Immunoenrichment microwave and magnetic proteomics for quantifying CD 47 in the experimental autoimmune encephalomyelitis model of multiple sclerosis. *Electrophoresis*, 33(24), 3820-3829.
72. Mahesula, S., Raphael, I., Raghunathan, R., Kalsaria, K., Kotagiri, V., Purkar, A. B., & ... (2012). Immunoenrichment Microwave & Magnetic (IM2) Proteomics for Quantifying CD47 in the EAE Model of Multiple Sclerosis. *Electrophoresis*, 33(24), 3820.
73. Raphael, I., Mahesula, S., Kalsaria, K., Kotagiri, V., Purkar, A. B., Anjanappa, M., & ... (2012). Microwave and magnetic (M2) proteomics of the experimental autoimmune encephalomyelitis animal model of multiple sclerosis. *Electrophoresis*, 33(24), 3810-3819.
74. Salzler, R. R., Shah, D., Doré, A., Bauerlein, R., Miloscio, L., Latres, E., & ... (2016). Myostatin deficiency but not anti-myostatin blockade induces marked proteomic changes in mouse skeletal muscle. *Proteomics*, 16(14), 2019-2027.
75. Shah, D., Anjanappa, M., Kumara, B. S., & Indires, K. M. (2012). Effect of post-harvest treatments and packaging on shelf life of cherry tomato cv. Marilee Cherry Red. *Mysore Journal of Agricultural Sciences*.

76. Shah, D., Dhanik, A., Cygan, K., Olsen, O., Olson, W., & Salzler, R. (2020). Proteogenomics and de novo sequencing based approach for neoantigen discovery from the immunopeptidomes of patient CRC liver metastases using Mass Spectrometry. *The Journal of Immunology*, 204(1\_Supplement), 217.16-217.16.
77. Shah, D., Salzler, R., Chen, L., Olsen, O., & Olson, W. (2019). High-Throughput Discovery of Tumor-Specific HLA-Presented Peptides with Post-Translational Modifications. *MSACL 2019 US*.
78. Srivastava, M., Copin, R., Choy, A., Zhou, A., Olsen, O., Wolf, S., Shah, D., & ... (2022). Proteogenomic identification of Hepatitis B virus (HBV) genotype-specific HLA-I restricted peptides from HBV-positive patient liver tissues. *Frontiers in Immunology*, 13, 1032716.
79. Big Data Analytics using Machine Learning Techniques on Cloud Platforms. (2019). *International Journal of Business Management and Visuals*, ISSN: 3006-2705, 2(2), 54-58. <https://ijbmv.com/index.php/home/article/view/76>
80. Pavan Ogeti, Narendra Sharad Fadnavis, Gireesh Bhaulal Patil, Uday Krishna Padyana, Hitesh Premshankar Rai. (2022). Blockchain Technology for Secure and Transparent Financial Transactions. *European Economic Letters (EEL)*, 12(2), 180-188. Retrieved from <https://www.eelet.org.uk/index.php/journal/article/view/1283>
81. Challa, S. S. S., Chawda, A. D., Benke, A. P., & Tilala, M. (2023). Regulatory intelligence: Leveraging data analytics for regulatory decision-making. *International Journal on Recent and Innovation Trends in Computing and Communication*, 11(11), 1426-1434. Retrieved from <http://www.ijritcc.org>
82. Fadnavis, N. S., Patil, G. B., Padyana, U. K., Rai, H. P., & Ogeti, P. (2021). Optimizing scalability and performance in cloud services: Strategies and solutions. *International Journal on Recent and Innovation Trends in Computing and Communication*, 9(2), 14-23. Retrieved from <http://www.ijritcc.org>
83. Challa, S. S. S., Tilala, M., Chawda, A. D., & Benke, A. P. (2021). Navigating regulatory requirements for complex dosage forms: Insights from topical, parenteral, and ophthalmic products. *NeuroQuantology*, 19(12), 971-994. <https://doi.org/10.48047/nq.2021.19.12.NQ21307>
84. Fadnavis, N. S., Patil, G. B., Padyana, U. K., Rai, H. P., & Ogeti, P. (2020). Machine learning applications in climate modeling and weather forecasting. *NeuroQuantology*, 18(6), 135-145. <https://doi.org/10.48047/nq.2020.18.6.NQ20194>