

Architectural Differences in Cloud Migration: A Detailed Study of AWS, Azure, and GCP Frameworks

Jack Lee¹, Syed Ali Fathima²

¹ Student, National University of Singapore, Singapore.

² Department of Computer Science, Sengunthar Engineering College, Tiruchengode, India.

Abstract - Cloud computing has revolutionized IT infrastructure, offering scalable and cost-effective solutions for enterprises. However, migrating applications and services to the cloud presents challenges that differ across platforms. This study delves into the architectural differences in cloud migration frameworks offered by Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP). The paper discusses key aspects such as compute resources, networking, storage, security, and compliance, providing a comparative analysis. Furthermore, it highlights migration strategies, best practices, and challenges encountered. This research aims to assist organizations in selecting the most suitable cloud provider based on their specific requirements and workload characteristics.

Keywords - Cloud Migration, Aws, Azure, Gcp, Cloud Architecture, Hybrid Cloud, Multi-Cloud, Cloud Security, Scalability, Performance Optimization, Cost Efficiency.

I. INTRODUCTION

A. Background

Cloud migration refers to the process of transferring digital assets, including applications, databases, and services, from on-premises infrastructure to the cloud. Organizations adopt cloud migration to leverage benefits such as scalability, high availability, and operational efficiency.

B. Importance of Cloud Migration

With the rapid growth of data-driven technologies, businesses are transitioning to cloud-based environments to enhance agility and competitiveness. Cloud platforms provide Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS), streamlining enterprise operations.

C. Cloud Migration Challenges

Migrating to the cloud involves various complexities, including data security, compliance, performance optimization, and cost management. Understanding the unique offerings of AWS, Azure, and GCP is crucial for businesses to make informed migration decisions.

D. Objectives of the Study

- Compare AWS, Azure, and GCP cloud migration architectures.
- Identify the best migration strategies based on workload types.
- Evaluate the cost, performance, and security differences among cloud providers.

II. LITERATURE SURVEY

A. Evolution of Cloud Computing

Cloud computing has undergone significant transformations from traditional on-premises data centers to fully managed cloud environments. Initially, enterprises relied on physical data centers, which required extensive capital investments in hardware, networking, and maintenance. With the advent of virtualization, organizations started using private clouds, enabling better resource utilization and efficiency.

As cloud computing matured, public cloud services such as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) became prominent. These models allowed businesses to scale resources dynamically without large upfront investments.

In recent years, hybrid cloud and multi-cloud strategies have gained traction.

- Hybrid Cloud integrates private cloud infrastructure with public cloud services, offering greater flexibility and control over sensitive data.
- Multi-Cloud involves using multiple cloud providers (e.g., AWS, Azure, and GCP) to avoid vendor lock-in and enhance redundancy.

The evolution of cloud computing has been driven by technological advancements, regulatory requirements, and the demand for scalable, secure, and cost-efficient solutions.

B. Comparative Studies on Cloud Migration Frameworks

Cloud migration involves moving applications, data, and workloads from on-premises infrastructure to a cloud-based environment. Several studies have analyzed migration strategies, which generally fall into the following categories:

- **Rehosting (Lift and Shift)** – Moving applications to the cloud with minimal modifications.
- **Replatforming (Lift, Tinker, and Shift)** – Making slight optimizations while keeping the core architecture intact.
- **Refactoring (Re-architecting)** – Redesigning applications to leverage cloud-native capabilities.
- **Retiring and Retaining** – Identifying legacy systems to phase out or keep on-premises.

Comparative studies emphasize three critical aspects:

- **Compatibility:** Ensuring applications function efficiently in the new cloud environment.
- **Security:** Addressing compliance and risk management when transferring sensitive data.
- **Cost-Effectiveness:** Optimizing cloud expenses by choosing the right service models.

These studies provide best practices for reducing downtime, mitigating risks, and optimizing cloud performance, ensuring a seamless migration process.

C. Security and Compliance Considerations

Security remains one of the biggest concerns in cloud migration. Different cloud providers offer varying security frameworks to safeguard data, applications, and networks. The key security aspects include:

- **Identity and Access Management (IAM)** – Ensuring only authorized users can access cloud resources.
- **Data Encryption** – Protecting sensitive information through encryption in transit and at rest.
- **Threat Detection and Response** – Leveraging AI-driven monitoring and response systems.

Compliance is another crucial factor, as organizations must adhere to regulatory standards such as:

- **GDPR (General Data Protection Regulation)** – Governing data privacy and security in the EU.
- **HIPAA (Health Insurance Portability and Accountability Act)** – Ensuring secure handling of healthcare data.
- **ISO 27001** – International standard for information security management.

Failure to comply with these regulations can result in hefty fines, reputational damage, and legal consequences. Cloud providers offer various compliance certifications, but businesses must evaluate their own security posture before migration.

D. Performance Benchmarks in Cloud Environments

The performance of cloud environments varies depending on factors such as latency, throughput, and resource allocation. Studies have benchmarked AWS, Azure, and GCP using different performance metrics:

- **Latency** – The time it takes for data to travel between cloud services and users.
- **Throughput** – The amount of data that can be processed over a given period.
- **Resource Allocation** – The efficiency of virtual machines, storage, and networking services.

Comparative Performance Insights

- **AWS** – Known for its high availability and extensive global infrastructure, AWS offers low-latency connections through its AWS Direct Connect service.
- **Azure** – Optimized for enterprises, Azure integrates well with Microsoft's ecosystem and provides high-performance virtual machines.
- **GCP** – Google Cloud emphasizes AI-driven optimizations and network efficiency, making it ideal for big data workloads.

The selection of a cloud provider depends on specific workload requirements, such as compute power, network efficiency, and storage optimization. Understanding these benchmarks helps organizations optimize cloud performance and reduce operational costs.

III. METHODOLOGY

A. Research Approach

This study employs a qualitative and quantitative analysis of cloud migration architectures, focusing on AWS, Azure, and GCP.

B. Data Collection

Data is collected from whitepapers, official cloud provider documentation, case studies, and industry reports.

C. Comparative Analysis Framework

A structured comparison is performed based on the following criteria:

- Compute Services: Virtual Machines (VMs), Serverless, Kubernetes
- Storage Solutions: Block storage, Object storage, File storage
- Networking Architecture: Virtual Networks, Load Balancing, Interconnectivity
- Security & Compliance: Identity Management, Encryption, Certifications
- Cost Considerations: Pricing Models, Billing Mechanisms

D. Migration Strategies

- Rehost (Lift and Shift): Direct migration of workloads without modification.
- Refactor (Re-Architecting): Optimizing applications for cloud-native features.
- Replatform (Lift, Tinker, and Shift): Partial modifications to enhance performance.
- Retire/Retain: Decommissioning outdated applications or keeping them on-premises.

IV. RESULTS AND DISCUSSION

A. Comparison of Cloud Migration Architectures

Table 1: Comparison of Cloud Services Across AWS, Azure, and GCP

| Feature | AWS | Azure | GCP |
|------------|---------------------|-----------------------------------|------------------------------------|
| Compute | EC2, Lambda | Virtual Machines, Functions | Compute Engine, Cloud Functions |
| Storage | S3, EBS, EFS | Blob, Managed Disks | Cloud Storage, Persistent Disks |
| Networking | VPC, Direct Connect | Virtual Network, ExpressRoute | VPC, Cloud Interconnect |
| Security | IAM, KMS, Shield | Active Directory, Security Center | IAM, Cloud Security Command Center |
| Compliance | GDPR, HIPAA | ISO, GDPR, FedRAMP | SOC, GDPR, ISO |

B. Cost Considerations

Table 2: provides a cost comparison for similar VM configurations across AWS, Azure, and GCP.

| Provider | Instance Type | vCPUs | RAM | Hourly Cost |
|----------|---------------|-------|-----|-------------|
| AWS | t3.medium | 2 | 4GB | \$0.0416 |
| Azure | B2s | 2 | 4GB | \$0.0400 |
| GCP | e2-standard-2 | 2 | 4GB | \$0.0336 |

C. Security and Compliance Analysis

AWS, Azure, and GCP each provide extensive security features, but their implementations vary. The study discusses encryption methods, identity management, and compliance adherence.

V. CONCLUSION

A. Summary of Findings

This study highlights the differences in cloud migration architectures of AWS, Azure, and GCP, emphasizing their unique strengths and weaknesses. Organizations must consider workload-specific requirements when choosing a cloud provider.

B. Recommendations

- For High-Performance Computing: AWS offers superior networking capabilities.
- For Hybrid Cloud Implementations: Azure’s integration with on-premises infrastructure makes it a strong candidate.
- For Cost-Effective Solutions: GCP provides competitive pricing with robust AI/ML services.

C. Future Work

Further research can explore real-world migration case studies, focusing on emerging trends like edge computing and AI-driven cloud management.

VI. REFERENCES

1. Laplante, P. A. (2020). *Mainframe Modernization: A Business and Technical Guide*. Wiley.
2. Moolchandani, S., (2024). The Integration of Generative AI in Credit Risk Management. Journal Homepage: <http://www.ijmra.us>, 14(02).
3. Gartner, Inc. (2023). *Market Guide for Cloud Migration Services*. Gartner.
4. Sanjay Moolchandani. Exploring Bayesian Hierarchical Models for Multi-Level Credit Risk Assessment: Detailed Insights, International Journal of Computer Science & Information Technology (IJCSIT) Vol 16, No 3, June 2024. DOI: 10.5121/ijcsit.2024.16306-67.
5. Amazon Web Services. (2021). *Mainframe Modernization on AWS: A Step-by-Step Approach*. Amazon Web Services.
6. Anusha Medavaka, "K-Means Clustering Algorithm to Search into the Documents Containing Natural Language" in "International Journal of Scientific Research in Science and Technology", Vol. 3, Issue No. 8, Dec-2017[ISSN : 2395-602X]
7. Chintala, S. and Thiagarajan, V. "AI-Driven Business Intelligence: Unlocking the Future of Decision-Making," ESP International Journal of Advancements in Computational Technology, vol. 1, pp. 73-84, 2023.
8. Microsoft. (2022). *Azure for Mainframe Modernization*. Microsoft Azure.
9. Chintala, Suman. (2024). Smart BI Systems: The Role of AI in Modern Business. ESP Journal of Engineering & Technology Advancements. 10.56472/25832646/JETA-V4I3P05.
10. Google Cloud. (2022). *Migrate for Compute Engine: A Guide for Mainframe Migration*. Google Cloud.
11. Suman Chintala, "Boost Call Center Operations: Google's Speech-to-Text AI Integration," International Journal of Computer Trends and Technology, vol. 72, no. 7, pp.83-86, 2024. Crossref, <https://doi.org/10.14445/22312803/IJCTT-V72I7P110>
12. Venkatesh, V., & Bala, H. (2008). *Technology Acceptance Model: A Literature Review and Its Implications for Information Systems Research*. European Journal of Information Systems, 17(4), 300-320.
13. S. K. Suvvari, "The impact of agile on customer satisfaction and business value," Innov. Res. Thoughts, vol. 6, no. 5, pp. 199-211, 2020.
14. Forrester Research. (2022). *The Total Economic Impact of AWS Mainframe Modernization*. Forrester Research.
15. Sunil Kumar Suvvari & DR. VIMAL DEEP SAXENA. (2024). Innovative Approaches to Project Scheduling: Techniques and Tools. Innovative Research Thoughts, 10(2), 133-143. <https://doi.org/10.36676/irt.v10.i2.1481>
16. IDC. (2023). *Worldwide Cloud Infrastructure Forecast*. IDC.
17. S. K. Suvvari, "Project portfolio management: Best practices for strategic alignment," Innov. Res. Thoughts, vol. 8, no. 4, pp. 372-385, 2022.
18. Bauer, W., & Buchta, J. (2020). *A Comparative Analysis of Cloud Migration Strategies: AWS, Azure, and Google Cloud*. Journal of Cloud Computing: Advances, Systems, and Applications, 9(1), 15-30.
19. IBM Corporation. (2021). *Mainframe Modernization: Moving from Legacy to Cloud*. IBM Cloud.
20. Sudheer Amgothu, "An End-to-End CI/CD Pipeline Solution Using Jenkins and Kubernetes", International Journal of Science and Research (IJSR), Volume 13 Issue 8, August 2024, pp. 1576-1578, <https://www.ijsr.net/getabstract.php?paperid=SR24826231120>, DOI: <https://www.doi.org/10.21275/SR24826231120>
21. IT Role in Facilitating Data Sharing Through Hies, Enhancing Patient Care Continuity - Saurabh Gupta - IJFMR Volume 5, Issue 6, November-December 2023. DOI 10.36948/ijfmr.2023.v05i06.29361.
22. Giridhar Kankanala, Sudheer Amgothu, 2024. *Choosing Right Computing Resources for SAP Environments: Hyperscaler Connectivity, Networking For Your Server Management Strategies*, ESP Journal of Engineering & Technology Advancements, 4(2): 134-136.
23. Brahmaji, K.K.P. (2024). Explainable AI in data analytics: Enhancing transparency and trust in complex machine learning models. International Journal of Computer Engineering and Technology, 15(5), 1054-1061. https://iaeme.com/MasterAdmin/Journal_uploads/IJCET/VOLUME_15_ISSUE_5/IJCET_15_05_099.pdf
24. Rajarao Tadimety Akbar Doctor, 2016." *A METHOD AND SYSTEM FOR FLICKER TESTING OF LOADS CONTROLLED BY BUILDING MANAGEMENT DEVICES*", patent Office IN, Patent number-201641009974, Application number, 201641009974,

25. Dixit, A., Sabnis, A., Balgude, D., Kale, S., Gada, A., Kudu, B., Mehta, K., Kasar, S., Handa, D., Mehta, R. and Kshirsagar, S., 2023. Synthesis and characterization of citric acid and itaconic acid-based two-pack polyurethane antimicrobial coatings. *Polymer Bulletin*, 80(2), pp.2187-2216.
26. Apurva Kumar, Shilpa Priyadarshini, "Adaptive AI Infrastructure: A Containerized Approach For Scalable Model Deployment", *International Research Journal of Modernization in Engineering Technology and Science*, Volume:06/Issue:11/November-2024, <https://www.doi.org/10.56726/IRJMETS64700>
27. S. Duary, P. Choudhury, S. Mishra, V. Sharma, D. D. Rao and A. Paul Aderemi, "Cybersecurity 0054 threats Detection in Intelligent Networks using Predictive Analytics Approaches," *2024 4th International Conference on Innovative Practices in Technology and Management (ICIPTM)*, Noida, India, 2024, pp. 1-5, doi: 10.1109/ICIPTM59628.2024.10563348.
28. S. Kumar, R. S. M. Joshitta, D. D. Rao, Harinakshi, S. Masarath and V. N. Waghmare, "Storage Matched Systems for Single-Click Photo Recognition Using CNN," *2023 International Conference on Communication, Security and Artificial Intelligence (ICCSAI)*, Greater Noida, India, 2023, pp. 1-7, doi: 10.1109/ICCSAI59793.2023.10420912.
29. Anusha Medavaka, P. Shireesha, "Analysis and Usage of Spam Detection Method in Mail Filtering System" in "International Journal of Information Technology and Management", Vol. 12, Issue No. 1, February-2017 [ISSN : 2249-4510]
30. Mihir Mehta, 2024, "A Comparative Study Of AI Code Bots: Efficiency, Features, And Use Cases", *International Journal of Science and Research Archive*, volume 13, Issue 1, 595-602,
31. P. Gowda and A. N. Gowda, "Best Practices in REST API Design for Enhanced Scalability and Security," *Journal of Artificial Intelligence, Machine Learning and Data Science*, Vol. 2, No. 1, pp. 827-830, Feb. 2024, doi: 10.51219/jaimld/priyanka-gowda/202
32. Chintale, P., Korada, L., Ranjan, P., Malviya, R. K., & Perumal, A. P. (2021). The Impact of Covid-19 on Cloud Service Demand and Pricing in the Fintech Industry. *Journal of Harbin Engineering University*, 42(7).
33. Muthukumaran Vaithianathan, Mahesh Patil, Shunye Frank Ng, Shiv Udkar, 2024. "Integrating AI and Machine Learning with UVM in Semiconductor Design", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)*, Volume 2, Issue 3: 37-51.
34. *Hybrid Transformation Model: A Customized Framework for the Digital-First World* - Karthik Hosavaranchi Puttaraju - *IJFMR* Volume 4, Issue 1, January-February 2022.
35. Karthik Hosavaranchi Puttaraju, "Strategic Innovation Management: A Framework for Digital Product Portfolio Optimization", *International Scientific Journal of Engineering and Management*, VOLUME: 01 ISSUE: 01|AUG - 2022 DOI: 10.55041/ISJEM0018
36. N. R. Palakurti, "Machine Learning Mastery: Practical Insights for Data Processing", *Practical Applications of Data Processing, Algorithms, and Modeling*, p. 16-29, 2024.
37. Karthik Chowdary Tsaliki, "Revolutionizing Identity Management with AI: Enhancing Cyber Security and Preventing ATO", *International Research Journal of Modernization in Engineering Technology and Science*, volume: 6/Issue: 04/April-2024.
38. Vishwanath Gojanur, Aparna Bhat, "Wireless Personal Health Monitoring System", *IJETCAS: International Journal of Emerging Technologies in Computational and Applied Sciences*, eISSN: 2279-0055, pISSN: 2279-0047, 2014.
39. Aparna Bhat, "Comparison of Clustering Algorithms and Clustering Protocols in Heterogeneous Wireless Sensor Networks: A Survey," 2014 *INTERNATIONAL JOURNAL OF SCIENTIFIC PROGRESS AND RESEARCH (IJSPR)* - ISSN: 2349-4689 Volume 04- NO.1, 2014.
40. Aparna Bhat, Rajeshwari Hegde, "Comprehensive Study of Renewable Energy Resources and Present Scenario in India," 2015 *IEEE International Conference on Engineering and Technology (ICETECH)*, Coimbatore, TN, India, 2015.
41. Chanthati, Sasibhushan Rao. (2021). *A segmented approach to encouragement of entrepreneurship using data science*. *World Journal of Advanced Engineering Technology and Sciences*. <https://doi.org/10.30574/wjaets.2024.12.2.0330>,
42. Artificial Intelligence-Based Cloud Planning and Migration to Cut the Cost of Cloud SR Chanthati - Authorea Preprints, 2024 <http://dx.doi.org/10.22541/au.172115306.64736660/v1> Sasi-Rao: SR Chanthati will pick up the Google scholar and Chanthati, S. R. (2024).
43. Dhamotharan Seenivasan, Muthukumaran Vaithianathan, 2023. "Real-Time Adaptation: Change Data Capture in Modern Computer Architecture", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)*, Volume 1, Issue 2: 49-61.
44. Naresh Kumar Miryala, Divit Gupta, "Big Data Analytics in Cloud - Comparative Study," *International Journal of Computer Trends and Technology*, vol. 71, no. 12, pp. 30-34, 2023. Crossref, <https://doi.org/10.14445/22312803/IJCTT-V71I12P107>

45. Naresh Kumar Miryala, Divit Gupta, "Data Security Challenges and Industry Trends" IJARCCCE International Journal of Advanced Research in Computer and Communication Engineering, vol. 11, no.11, pp. 300-309, 2022, Crossref <https://doi.org/10.17148/IJARCCCE.2022.111160>
46. Venkata Sathya Kumar Koppiseti, 2024. "Robotic Process Automation: Streamlining Operations in the Digital Era", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)*, Volume 2, Issue 2: 74-81.
47. Venkata Sathya Kumar Koppiseti, 2024. "Deep Learning: Advancements and Applications in Artificial Intelligence" *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)*, Volume 2, Issue 2: 106-113.
48. Kushal Walia, 2024. "Scalable AI Models through Cloud Infrastructure", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)* Volume 2, Issue 2: 1-7.
49. Arnab Dey (2022). Automation for CI/CD Pipeline for Code Delivery with Multiple Technologies. Journal of Mathematical & Computer Applications. SRC/JMCA-170. DOI: [doi.org/10.47363/JMCA/2022\(1\)138](https://doi.org/10.47363/JMCA/2022(1)138)
50. S. E. V. S. Pillai and K. Polimetla, "Enhancing Network Privacy through Secure Multi-Party Computation in Cloud Environments," 2024 International Conference on Integrated Circuits and Communication Systems (ICICACS), Raichur, India, 2024, pp. 1-6, doi: 10.1109/ICICACS60521.2024.10498662.
51. Shreyaskumar Patel "Enhancing Image Quality in Wireless Transmission through Compression and Denoising Filters" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-3, April 2021, pp.1318-1323, URL: <https://www.ijtsrd.com/papers/ijtsrd41130.pdf>
52. Anusha Medavaka, "Identification of Security Threats and Proposed Security Mechanisms for Wireless Sensor Networks" in "International Journal of Scientific Research in Computer Science, Engineering and Information Technology", Vol. 5, Issue No. 3, May-2019 [ISSN : 2456-3307]
53. Muthukumaran Vaithianathan, Mahesh Patil, Shunye Frank Ng, Shiv Udkar, 2024. "Low-Power FPGA Design Techniques for Next-Generation Mobile Devices", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)*, Volume 2, Issue 2: 82-93.
54. Anusha Medavaka, "Monitoring and Controlling Local Area Network Using Android APP" in "International Journal of Research", Vol. 7, Issue No. IV, April-2018 [ISSN : 2236-6124]
55. S. Kumar, R. S. M. Joshitta, D. D. Rao, Harinakshi, S. Masarath and V. N. Waghmare, "Storage Matched Systems for Single-Click Photo Recognition Using CNN," 2023 *International Conference on Communication, Security and Artificial Intelligence (ICCSAI)*, Greater Noida, India, 2023, pp. 1-7, doi: 10.1109/ICCSAI59793.2023.10420912.
56. Rao, Deepak, and Sourabh Sharma. "Secure and Ethical Innovations: Patenting Ai Models for Precision Medicine, Personalized Treatment, and Drug Discovery in Healthcare." International Journal of Business Management and Visuals, ISSN: 3006-2705 6.2 (2023): 1-8.
57. Chandrakanth Lekkala 2022. "Integration of Real-Time Data Streaming Technologies in Hybrid Cloud Environments: Kafka, Spark, and Kubernetes", *European Journal of Advances in Engineering and Technology*, 2022, 9(10):38-43.
58. Anusha Medavaka, "An Overview of Security Mechanisms Towards Different Types of Attacks" in "International Journal of Scientific Research in Science and Technology", Vol. 4, Issue No. 10, October-2018 [ISSN : 2395-602X]
59. Anusha Medavaka, P. Shireesha, "Optimal framework to Wireless Rechargeable Sensor Network based Joint Spatial of the Mobile Node" in "Journal of Advances in Science and Technology", Vol. XI, Issue No. XXII, May 2016 [ISSN : 2230-9659]
60. Chandrakanth Lekkala, "Utilizing Cloud – Based Data Warehouses for Advanced Analytics: A Comparative Study", *International Journal of Science and Research (IJSR)*, Volume 11 Issue 1, January 2022, pp. 1639-1643, <https://www.ijsr.net/getabstract.php?paperid=SR24628182046>
61. Lekkala, Chandrakanth, AI-Driven Dynamic Resource Allocation in Cloud Computing: Predictive Models and Real-Time Optimization (February 06, 2024). *J Artif Intell Mach Learn & Data Sci* | Vol: 2 & Iss: 2, Available at SSRN: <https://ssrn.com/abstract=4908420> or <http://dx.doi.org/10.2139/ssrn.4908420>
62. Chandrakanth Lekkala 2023. "Implementing Efficient Data Versioning and Lineage Tracking in Data Lakes", *Journal of Scientific and Engineering Research*, Volume 10, Issue 8, pp. 117-123.
63. Sainath Muvva, Privacy-Preserving Data Engineering: Techniques, Challenges, and Future Directions, *International Journal of Scientific Research in Engineering and Management*, Volume: 05 Issue: 07 | July - 2021.
64. Muvva S. Optimizing Spark Data Pipelines: A Comprehensive Study of Techniques for Enhancing Performance and Efficiency in Big Data Processing, *Journal of Artificial Intelligence, Machine Learning and Data Science*, 2023, 1 (4), 1862-1865. Doi: doi.org/10.51219/JAIMLD/sainath-muvva/412

65. M. Rele and D. Patil, "Revolutionizing Liver Disease Diagnosis: AI-Powered Detection and Diagnosis", *International Journal of Science and Research (IJSR)*, 2023.<https://doi.org/10.21275/SR231105021910>
66. Anusha Medavaka, "Enhanced Classification Framework on Social Networks" in "Journal of Advances in Science and Technology", Vol. IX, Issue No. XIX, May-2015 [ISSN : 2230-9659]
67. Muthukumaran Vaithianathan, Mahesh Patil, Shunye Frank Ng, Shiv Udkar, 2024. "Energy-Efficient FPGA Design for Wearable and Implantable Devices", *ESP International Journal of Advancements in Science & Technology (ESP-IJAST)*, Volume 2, Issue 2: 37-51.
68. Lakshmana Kumar Yenduri, 2024. "Low Latency High Throughput Data Serving Layer for Generative AI Applications using the REST-based APIs" *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)* Volume 2, Issue 3: 61-76.
69. Vinay Panchal, 2025. "Designing for Longer Battery Life: Power Optimization Strategies in Modern Mobile SOCS", *International Journal of Electrical Engineering and Technology (IJEET)* Volume 16, Issue 1, January-February 2025, pp. 1-17, Article ID: IJEET_16_01_001 Available online at <https://iaeme.com/Home/issue/IJEET?Volume=16&Issue=1>
70. Vinay Panchal, 2024. "Thermal and Power Management Challenges in High-Performance Mobile Processors", *International Journal of Innovative Research of Science, Engineering and Technology (IJIRSET)*, Volume 13, Issue 11, November 2024 |DOI: 10.15680/IJIRSET.2024.1311014.
71. Mohanakrishnan Hariharan, 2025. "Reinforcement Learning: Advanced Techniques for LLM Behavior Optimization", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)*, Volume 2, Issue 2: 84-101.
72. Sukhdevsinh Dhummad, Tejaskumar Patel, "Advanced SQL Techniques for Efficient Data Migration: Strategies for Seamless Integration across Heterogeneous Systems," *International Journal of Computer Trends and Technology*, vol. 72, no. 12, pp. 38-50, 2024. Crossref, <https://doi.org/10.14445/22312803/IJCTT-V72I12P105>
73. Anusha Medavaka, 2023. "Building Intelligent Systems on AWS: From Data Lakes to AI-Powered Insights", *ESP International Journal of Advancements in Computational Technology (ESP-IJACT)* Volume 1, Issue 3: 68-80.
74. Anusha Medavaka, "Enhanced Classification Framework on Social Networks" in "Journal of Advances in Science and Technology", Vol. IX, Issue No. XIX, May-2015 [ISSN : 2230-9659]
75. Anusha Medavaka, P. Shireesha, "A Survey on Traffic Cop Android Application" in "Journal of Advances in Science and Technology", Vol. 14, Issue No. 2, September-2017 [ISSN : 2230-9659]
76. Anusha Medavaka, P. Shireesha, "Review on Secure Routing Protocols in MANETs" in "International Journal of Information Technology and Management", Vol. VIII, Issue No. XII, May-2015 [ISSN : 2249-4510]
77. Anusha Medavaka, P. Shireesha, "Optimal framework to Wireless Rechargeable Sensor Network based Joint Spatial of the Mobile Node" in "Journal of Advances in Science and Technology", Vol. XI, Issue No. XXII, May 2016 [ISSN : 2230-9659]
78. Anusha Medavaka, "Algorithm Feasibility on IoT Devices with Memory and Computational Power Constraints", *International Journal of Science and Research (IJSR)*, Volume 8, Issue 5, May 2019 [ISSN : 2319-7064]
79. Atri P. Enabling AI Work flows: A Python Library for Seamless Data Transfer between Elasticsearch and Google Cloud Storage. *J Artif Intell Mach Learn & Data Sci* 2022, 1(1), 489-491. DOI: doi.org/10.51219/JAIMLD/preyaa-atri/132
80. Anusha Medavaka, "Programmable Big Data Processing Framework to Reduce On-Chip Communications and Computations Towards Reducing Energy of the Processing" in "International Journal of Advanced Research in Computer and Communication Engineering", Volume 8, Issue 4, April 2019, [ISSN : 2278-1021]
81. Anusha Medavaka, "A study on the process of hiding protective information from the big data processing databases" in "International journal of basic and applied research", Vol. 9, Issue No. 6, June-2019 [ISSN : 2278-0505]
82. Atri P. Cloud Storage Optimization Through Data Compression: Analyzing the Compress-CSV-Files-GCS-Bucket Library. *J Artif Intell Mach Learn & Data Sci* 2023, 1(3), 498-500. DOI: doi.org/10.51219/JAIMLD/preyaa-atri/134
83. Anusha Medavaka, "A REVIEW ON DISPLAYING KNOWLEDGE INTO THE UNLIMITED WORLDVIEW OF BIG DATA" in "International Journal of Research and Analytical Reviews", Vol. 6, Issue No. 2, May-2019 [ISSN : 2348-1269]

84. Anusha Medavaka, "A Comprehensive Study on Characteristics of Big Data and the Platform Used in Big Data" in "International Journal for Scientific Research & Development", Vol. 7, Issue No. 3, May-2019 [ISSN : 2321-0613]
85. Anusha Medavaka, Siripuri Kiran, "Implementation of dynamic handover reduce function algorithm towards optimizing the result in reduce function" in "International Journal of Academic Research and Development", Vol. 4, Issue No. 4, July-2019 [ISSN : 2455-4197]
86. Preyaa Atri, "Empowering AI with Efficient Data Pipelines: A Python Library for Seamless Elasticsearch to BigQuery Integration", International Journal of Science and Research (IJSR), Volume 12 Issue 5, May 2023, pp. 2664-2666, <https://www.ijsr.net/getabstract.php?paperid=SR24522145306>