Amal Antony Alex

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EDUCATION

Sri Sri University, Odisha, India   **July 2023 – Present**
Bachelor of Technology in Computer Science with specialization in Cyber Security   *7.9 CGPA*

EXPERIENCES

TCS iON, Tata Consultancy Services Limited   **Remote, Cuttack, Odisha, India**
Learning Intern   *December 2024 – February 2025*

- Designed and implemented a containerized Jenkins CI/CD pipeline using Docker and AWS services, streamlining automated build, test, and deployment workflows for cloud-based applications.
- Optimized pipeline efficiency by integrating Jenkins with AWS EC2, S3, and ECR, reducing build and deployment times by an estimated 25%.
- Automated infrastructure provisioning using Infrastructure-as-Code (IaC) principles with AWS CLI and custom scripts, ensuring reproducible and scalable environments.
- Enhanced pipeline reliability by incorporating automated testing, rollback strategies, and monitoring dashboards, improving fault tolerance and visibility into deployment health.
- Documented the end-to-end pipeline architecture, configurations, and workflows, enabling ease of handover, scalability, and maintenance for future development teams.

SSUIMUN, Sri Sri University   **On-site, Cuttack, Odisha, India**
Organizing Committee Member   *October 2023 – Present*

- Progressed through leadership roles — **Secretary General**, previously **Deputy Secretary General** and **Deputy Director General** — demonstrating sustained commitment and increasing responsibility within the Secretariat.
- Spearheaded the planning and execution of international MUN conferences, leading logistics, operations, and a team of 70+ heads, directors and volunteers to deliver high-quality diplomatic simulations.
- Managed key relationships with university authorities, diplomats, sponsors, and academic institutions, securing partnerships and institutional support for event success.
- Coordinated event documentation, including participant lists, official reports, stakeholder correspondence, and post-event records to ensure smooth knowledge transfer and compliance.
- Designed and implemented strategic initiatives to enhance participant engagement, while mediating disputes, solving operational challenges, and ensuring procedural adherence throughout events.

PROJECTS

***Manufacturing Plant Network Design – Cisco Packet Tracer Simulation** [GitHub]*

- Engineered a scalable network architecture for a manufacturing plant, integrating Production, Quality Control, Logistics, and Administration zones to support seamless communication and optimized data flow.
- Designed and implemented VLAN segmentation to securely isolate IoT devices, SCADA systems, enterprise applications, and guest networks, enhancing both security and operational efficiency.
- Configured Layer 2 and Layer 3 network devices (switches, routers) with static routing, NAT, ACLs, and DHCP services to ensure reliable inter-zone communication and controlled external access via a DMZ.
- Integrated real-time monitoring solutions using SNMP and Syslog servers within the simulation to detect and respond to network anomalies without disrupting plant operations.
- Applied redundancy mechanisms (STP, router failover) to ensure high availability and fault tolerance, safeguarding critical OT systems from downtime and industrial cyber threats.
- Documented the complete network topology, IP addressing scheme, and security configurations, ensuring scalability, maintainability, and compliance with industrial best practices.

TECHNICAL SKILLS | TOOLS | PLATFORMS

- **Languages/Libraries/Frameworks:** Python, SQL, Linux, Java, DSA, C
- **Concepts:** Network Fundamentals, Input/Output (stdio.h), Cybersecurity, Application Securtiy, Risk Management, Cybersecurity Frameworks, SNMP, SCADA, IoT, Network Security, Cloud Platforms (AWS)
- **Tools:** Git, CISCO Packet Tracer, Linux, VS Code, Google Sheets & Docs, MS Excel & Word, Power BI, Oracle

CERTIFICATES

Data Analytics using Excel and Tableau (Deloitte Australia), Dashboard Creation Using Python & Data Structure (Deloitte Australia), CCNA: Introduction to Networks (CISCO Networking Academy), Business Understanding using Data Science (BCG X), Empowering Business with Effective Insights using Power BI (TATA Group), Practical Approach to Cyber Security (TCS iON), Solution Architecture using AWS (Amazon Web Services)