Anish Philip

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PROFESSIONAL EXPERIENCE

Graduate Research Assistant   May 2024 – present | Stony brook, United States
Secure Systems Lab (SBU)
- Developed an **NSF-funded full-stack framework** based in **Linux ,C++, React, Redux & TypeScript** for creating webapps with privacy policies.
- Spearheaded the design and implementation of **a comprehensive no-code UX framework** for enforcement of data privacy policies.
- Built a real-time cell-level spreadsheet module for tabular data, similar to Google Sheets, with integrated CI/CD pipelines using Github actions.

Chief Engineer | Lead Engineer | Engineer   Jul 2017 – Aug 2023 | Delhi, India
Samsung
- Awarded **Employee of the Year at Samsung** out of more than 3000+ employees in 2019.
- Innovated a **patent-backed cloud security** platform providing 1-click single sign-on concurrent access to 1500+ cloud resources, utilizing Golang, Python, Angular, and Ansible, for 50+ Samsung Smart TV services.
- Pivoted infrastructure architecture to **serverless**, with automated Infra provisioning pipelines enhancing response times by up to 300%.
- Architected a global-scale **Security Hub with zero-trust** architecture, achieving 99.9% availability through micro-services, **FastAPI, and the ELK stack**, catering to **multi-cloud** (AWS, Azure, and GCP) access,using Terraform and Kubernetes, with a global roll-out across 10+ divisions.
- Engineered a **real-time Email Response Management System** for Samsung Customer Support, reducing response time to 1 day.

Full-Stack Software Engineer - Intern   May 2016 – Jul 2016 | Delhi, India
Oxane Partners
- Led ideation,design and full-stack development of an assessment platform with **MVC architecture in Java, Spring, Hibernate and AngularJS**, reducing code redundancy by 60%.
- Streamlined **XML and JSON data pipelines** through automation, in an existing financial portfolio management system, along with data structure optimization, **reducing processing times by 50%.**

EDUCATION

Stony Brook University   Aug 2023 – Dec 2024 | NY, USA
MS Computer Science (with specialization in Data Science)
- Machine Learning, Distributed Systems, Analysis of Algorithms, Network Security, Data Science (Skiena)   **GPA 3.8/4**

Delhi Technological University (Formerly DCE)   Aug 2013 – May 2017 | Delhi, India
B. Tech in Software Engineering
- Operating System, Database Management System, Object Oriented Programming, Computer Network   **GPA 9.1/10** (**Top 3%**)

PROJECTS

CS Workflow (SBU | COMPAS LABS)   Jan 2024 – present
React | Node.js | GCP | Firebase
- Collaborated on a web application, successfully **digitizing 80% of the offline workflows** of the department.
- Leveraged Google Cloud Platform (GCP) for hosting and Firebase for backend services, **ensuring 99.9% availability and scalability**
- Implemented online form filling and signing with Adobe PDF API, and **CI/CD pipelines** for automated testing and deployment , **reaching 1000+ students** and faculty.

Machine Learning and Data Science (SBU)   Aug 2023 – Dec 2023
Python | Pandas | PyTorch
- **Quantifying Value/Significance of Place:** 🔗
  - Evaluated the significance of a business obtained from novel features, evaluating the economic, customer, social, and infrastructure impact of a business ,employing K-means, DB-SCAN clustering techniques.
  - Successfully validated ranking of businesses in districts of Queens, with **95.2% prediction accuracy** and deployed models using Docker.
- **Financial Trading System (FTS) using Reinforcement Learning** 🔗 :
  - Conducted a comprehensive analysis comparing state-of-the-art RL algorithms (Temporal Q-learning, LSTM, K-Line Clustering) to optimize profits, model parameters, and system efficiency, with **20% increase in revenue.**
  - Implemented **automated model evaluation pipelines**, ensuring consistent and accurate results using **zenML and MLflow**.

Kaggle   Aug 2023 – Dec 2023
Python | Pandas | Regression models | NLTK
- Optiver - Trading at the Close 🔗
  - Improved data **processing speed by 50%** using parallel processing and broadcasting techniques for large datasets.
  - Developed a unique method for calculating the sorted correlation matrix, enabling efficient clustering and analysis of stocks.
  - Evaluated multiple models, achieving the best prediction accuracy with Random Forest Regression for stock price prediction tasks.
- CommonLit - Evaluate Student Summaries 🔗
  - Implemented NLP techniques with NLTK for feature extraction, improving text-based data analysis **efficiency by 40%.**
  - Identified key features such as bad words, tokens, stop words, grammar corrections, and measured text similarity and readability.
  - Evaluated multiple regression models, achieving the best accuracy with Gradient Boost Regression for essay evaluation

Cloud Security and Infrastructure Governance (SAMSUNG)   Jan 2019 – Aug 2023
Golang | Python | Angular | Postgres | MySQL | AWS | GCP | Azure
- **Identity and Access Management**: Revolutionized infrastructure access and management for 100+ teams by achieving nearly **99.9% SLA** driven automation using Ansible and REST API (*made 100+ APIs*).
- **Security Operations Hub**: Boosted infrastructure **resilience by 40% and scalability by 70%** by integrating advanced threat mitigation and containerization, based on Python FastAPI, Ansible, and Kafka.

Data Analytics with OLAP Cubes (DTU)   Aug 2016 – May 2017
JAVA | R | OLAP | Python
- Demonstrated an R & Java based application for analyzing multidimensional datasets of **20GB+** size using OLAP cubes.
- Analyzed real-time datasets using **star schemas** and Cubing Algorithms and came up with our own algorithm to build sparse data cubes faster, using **HDF5** formats.

TECHNICAL SKILLS

- **Languages:** Golang, Python, JavaScript, TypeScript, Java, C/C++, Bash, SQL, R, HTML/CSS
- **Technologies:** Node.js, NextJS, Spring Boot, Angular, React, NestJS, Django, Bootstrap, GraphQL, REST, Kafka
- **DevOps & Cloud:** AWS, Azure, GCP, Kubernetes, Docker, Git, CI/CD, Jenkins, LDAP, Active Directory,MLflow, Kubeflow,zenML
- **Databases:** MySQL, Postgres, MongoDB, DynamoDB, Amazon Redshift, Amazon RDS, Hadoop, Redis

ACHIEVEMENTS

- Ascended through the ranks becoming **President- Computer Society of India (DTU)**, after roles such as Infrastructure Head, PR Head, Technical & Corporate Head and Joint Secretary over four years.
- Secured **All India Rank 1536** out of **1.5 million** candidates in Joint Entrance Examinations in India.