

EXPERIENCE

Google

Bengaluru, IN

Server Platform Trust and Compliance

June 2024–Current

Server Platform provides a framework for building and running servers on an internal container orchestration system (Borg). Key technologies include Boq and Pod (Production on Demand). The Trust and Compliance team focuses on the access management, security, insider risk and compliance journeys for users.

- The access management system for Server Platform touches multiple Google wide components and has a large blast radius.
- Led the unification efforts with limited to no involvement from the leads.
- The unification resulted in a significant decrease of 50% in the SWE toil time required to develop new security features on Server Platform access management system.
- As of writing this document, there are 5 of these features planned in the team.
- Authored the design document and launched the feature of unifying the systems, clearing up remaining tech debt from a previous handover.

Google DeepMind - Perception

January 2023–March 2024

- Created an expanded document question answering dataset using the Gemini Models and used the dataset to enhance Visual QA performance of open-sourced PaliGamma.
- Used the latest tools available internally to expand said dataset.
- Extended the DocLens Model, used to read medicinal details from prescriptions, to portions other than the medicine name.

Server Platform Turnup

August 2023–August 2024

The Turnup team focuses on the bring up of new services onto Server Platform.

- Successfully launched the “Pod dry-run” feature. This feature enabled users to migrate to Pod without changing their access management configurations, which caused significant toil.
- This resulted in savings of 10.43 SWE-years for Conga and 38.21 SWE-years for all Non SPM total addressable markets.
- Identified and addressed the ad hoc challenges like user configuration surface, gating mechanism, and changes to Server Platform and release pipelines during dry run implementation.
- Challenge was added when the timelines became critical. The announcement of “SRP by default for new Pod and Boq nodes” required support on another system (SRP), which came as a new requirement.
- De-risked the launch of new migrations onto the Pod platform by delivering SRP support.
- Designed and collaborated with the Rollouts team to launch v2 of dry run, with SRP support.
- Led the project and delivered well within timelines. Because of the efforts, the team was able to move in-place migrations to Open Beta.
- Demonstrated a strong commitment to mentorship, hosted an intern for SRP feature development.
- Guided an intern end-to-end successful delivery of the feature during the internship with a successful demo that received great feedback.

Resource Efficiency

January 2024 - March 2024

Tasked with standardizing the structure of the different recommendations used in the efficiency recommender pipeline using recommendation groups, I proposed, designed, and implemented a more shift-left approach.

- Independently designed, implemented and launched the end-to-end generation of recommendation groups.
- This reduced the process of adding/removing recommenders to 1SWE week (down from 4).
- This showcased strong planning, meticulous delivery and rollout of the feature without any outage/impact on the downstream systems.
- The recommender standardization enabled the creation of automated bug pipelines, created 101 bugs and 37 were fixed/verified, increasing resource efficiency across Google.
- Additionally proposed and set up an automation system for dashboards to automate the deployment of pull-requests to pipelines and dashboards in PLX thus saving substantial SWE hours and preventing any future errors.

Cloud Capacity Management Engineering

July 2022–August 2023

Delivered integration test infrastructure for shift-left regression detection for Google Cloud's capacity management systems. The infrastructure rolled out 20+ tests gating code submissions and 8 regression tests. The system prevented a possible third recurrence of a regression that affected 50 customers due to local SSD stock shortages.

Apple

Bengaluru, IN

Software Engineer Intern

Jan 2022–June 2022

- Created an application for iPadOS that allows users to view and filter logs.
- Worked on adding visualizations to macOS application.

Microsoft

Hyderabad, IN

Software Engineer Intern

May 2021–July 2021

- Worked with the Windows Defender team on a Chrome extension (>40k downloads) for Data Leak Prevention.
- Introduced a new feature to inform users about the sensitivity of a document.

Microsoft

Bengaluru, IN

Software Engineer Intern

May 2020–July 2020

- Analyzed the business usage of the Microsoft Bookings platform to estimate the real usage of the product.
- Consolidated data of more than 2 million users per month used for improving user experience.

PROJECTS

- **Predicting COVID-19 in India using Machine Learning** April 2021
 - Compiled, cleaned and visualized data from 4 sources, and 25 different features to create the dataset
 - Tested over 5 machine (LR, ARIMA, HMM) and deep learning (LSTM, Seq2Seq) models against the second wave of the disease.
 - Analyzed the impact of 10% reduction in mobility on the number of cases using Linear Regression.
- **Rasoe: What am I eating?** August 2020
 - PyTorch Global Summer Hackathon 2020 Runner Up
 - Developed an Android application that can recognize over 300 varieties food, and give links to recipes using an API call.

- Fine-tuned a pre-trained model in PyTorch on the Food-101 dataset.
- Deployed the model on the Android framework using TorchScript.

• TwoFace: An newer, easier authentication system

November 2019

2nd Runner ups in Microsoft code.fun.do++

- Built an Ionic + Loopback application that uses face-verification as its login component.
- Integrated the Microsoft FaceAPI into the application to recognize, save, and verify faces.

EDUCATION

Birla Institute of Technology and Science, Pilani

B.E. (Hons.) in Computer Science, GPA: 9.03/10

Goa, IN

2018–2022

TEACHING

- **Student Course Mentor** at BITS Pilani Fall 2021
Deep Learning (CS F245)
- **Technical Instructor** at CTE, BITS Pilani 2020–2021
Introduction to Data Analysis with Python
 - Taught basic Python to over 50 Biotech students as a CTE Instructor.
 - Additionally covered numpy, pandas and matplotlib for data processing and visualization
- **Student Teaching Assistant** at BITS Pilani Fall 2021
Computer Architecture (CS F342)
- **Student Teaching Assistant** at BITS Pilani Summer 2021
Microprocessors and Interfacing (CS F241)

CERTIFICATIONS

- **Deep Learning Specialization**
deeplearning.ai on Coursera
- **TensorFlow In Practice**
deeplearning.ai on Coursera
- **Data Analysis with Python: Zero to Pandas**
jovian.ai
- **Advent of Cyber 2020**
TryHackMe
- **OpenVINO Fundamental Course**
Intel IoT Edge AI Scholarship
- **Web Design for Everybody**
University of Michigan

COURSEWORK

- **Data Science:** Artificial Intelligence, Machine Learning, Natural Language Processing
- **Computer Science:** Data Structures and Algorithms, Operating Systems, Computer Networks, Database Management Systems

SKILLS

- **Programming:** Python, C/C++, Swift, Golang
- **ML:** PyTorch, TensorFlow, Keras, W&B
- **Tools/Techs:** Git/Github, L^AT_EX
- **Web:** HTML/CSS, React, JavaScript

SCHOLARSHIPS AND AWARDS

- Selected to participate at the **Research Week with Google** 2022
- Participated in **Microsoft Research India Academic Research Summit** 2020
- **PyTorch Global Summer Hackathon 2020** Runner Up's for Rasoe 2020
- **Intel IoT Edge AI Scholarship** recipient 2020
- 2nd Runner ups in **Microsoft code.fun.do++** for TwoFace 2019

VOLUNTEERING & MENTORING

- Web Developer at Indian Red Cross Society Summer 2020
Volunteered to develop a website for the IRCS Mumbai Blood Bank, used by partner organizations for the External Quality Assessment System.
- Mentor at Peer Mentorship Programme 2019–2020
Mentored newcomer Bachelor students, gave a campus tour and aided them in planning coursework.