

Aditya Agrawal

WORK EXPERIENCE

Software Engineering (Intern) - [Stockal](#)

January 2022 - July 2022

All the work was done keeping in mind the requirements and needs of all the parties (customer, clients, and service partners).

- Initiated the **PnL calculation** project and was a key member till the term, doing work around transaction data and further calculations and providing the same to service partners and clients.
- Worked on stock **prices** and candlestick **charts for technical analysis** using [TradingView advance charting library](#)
- Worked on data migration from **NoSQL** to **SQL** databases
- Worked on **Authentication, Logging** and other **middlewares** and on **REST APIs** in general
- Helped other team members in using **AWS lambda** to trigger services, easing work of Ops team members
- **Technologies Used:** DB -> TimescaleDB, AWS RDS, MongoDB, Redis | Backend -> NodeJS, Python, Golang | Others -> AWS

PROJECTS

TNP Portal

Project | [Gitlab](#)

- Common portal for students and companies to manage placements in the institute
- **Rate limiting** (Authentication token based - fallback to IP) backed by **Redis**
- **Horizontally Scalable** application.
- Automatic expiry of incomplete user profiles using **Redis Pub/Sub**
- **Tech Stack:** Front-end -> NextJS, MaterialUI | DB -> Postgres, Redis | Backend -> NodeJS, Firebase Storage | Others -> Redis Pub/Sub, Helmet.js

status-cron

Project

- A cron service to keep track of health of your services.
- Supports multiple service types (HTTP, Redis, SQL [Postgres, MySQL, Oracle], MongoDB)
- Works by sending a connection request to the service and adds an entry of the result to a Postgres database
- Helpful for tracking multiple services in a minimal form with flexibility to use the data acquired as wanted
- **Tech Stack:** Golang

DF-GAN, Text to Image Generation Sup.: Dr. CKM, Professor, CSE-IITH

[Github](#)

- Understand the architecture and working of Deep Fusion Generative Adversarial Network
- Implementation of the model and reproduce IS and FID scores for comparison
- Explore possible improvements in the architecture

Extended-2fA

Project | [Github](#)

- TOTP client for two factor authentication
- Demo app just to show the usage of **Camera** and **Security** Hardware of a mobile device on a webpage
- UI using material design
- Service worker and manifest files for offline use and Installable PWA
- **Tech Stack:** ReactJS, Service Workers

Networking Project, Sup.: Dr. Ramesh Kumar Jallu, Professor, CSE-IIITR

Presently Running

- Setup basic networking infrastructure for the institute
- Setup local LDAP, Intranet, Self-Hosted DNS, VPN and other systems required in daily use
- Setup security for Wifi, LAN and others services
- Try and improve overall performance and introduce fairness to the network

TECHNICAL SKILLS

Programming Languages	JavaScript, Golang, Python, C++, C
Databases	Postgres, Mongo DB, Redis, TimescaleDB
Frameworks	Next JS, Express JS, Material UI
Systems	Linux, AWS, Digital Ocean, Heroku

EDUCATION

Bachelor of Technology - Computer Science and Engineering,

July 2019 — June 2023

Indian Institute of Information Technology, Raichur

CGPA (Current): 8.7/10.00

COURSES

Institute Courses

• Data Structures • Algorithm Design and Analysis • Operating Systems • Software Engineering • Database Management Systems • Computer Architecture • Parallel and Concurrent Programming • Computational Methods • Advanced Algorithms • Digital Image Processing • Scalable Algorithms for Data Science

Online Courses and Certifications

- Google Cloud Platform Fundamentals: Core Infrastructure
- The Bits and Bytes of Computer Networking by Google
- Deploy to Kubernetes
- Qwiklabs Quests (AWS and GCP technologies)

VOLUNTEER EXPERIENCE

Teaching Assistant, Indian Institute of Information Technology Raichur

Sep 2020 — Present

- Introduction to Programming (under Dr. Rakesh Venkat, IITH)
- Operating Systems - 1 (under Dr. Sathya Peri, IITH)
- POPL (under Dr. Sadhana Jha, IIITR)
- Design and Analysis of Algorithms (under Dr. Ramesh Jallu, IIITR)

(Present)