Aditya Agrawal

Anand, Gujarat, India

GitHub Homepage Codechef

WORK EXPERIENCE

Software Engineering (Intern) - Stockal

January 2022 - July 2022

- Primary developer on the **P&L calculation** project and was a key member till the term.
- Done work around transaction data and further calculations and providing the same to service partners and clients, reducing manual work of OPs team to 0% and introduce third party integration
- Worked on stock **prices** to provide ticker price data for multiple features and calculations 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 to reduce rewriting of code across multiple projects
- Technologies Used: DB -> TimescaleDB, AWS RDS, MongoDB, Redis | Backend -> NodeJS, Python, Golang | Others -> AWS, Pandas

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

Work Stealing Dequeues, Pull based work balancing Sup.: Dr. Sathya Peri, Professor, CSE-IITH

Github

- · Understand and Implement a work stealing dequeue to balance work among idle and loaded threads
- Implementation of the model in a multi-core environment
- Explore possible improvements and implementation in a distributed environment (balance multi-region load, etc.)
- Tech Stack: C++

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
- · Tech Stack: Python, PyTorch

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

Presently Running

- Setup local LDAP, Intranet, Self-Hosted DNS, VPN and other systems required in daily use
- Setup security for Wifi, LAN and others intranet services
- Implement common shared printer service for students

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,

Indian Institute of Information Technology, Raichur

CGPA (Current): 8.58/10.00

July 2019 — June 2023

XII, CBSE, Grades: 85% **2018 — 2019**

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

Cloud Facilitator, Google Developer Student Club - IIIT Raichur

Sept 2021 — Apr 2022

· Get to know about the Google Cloud Platform (GCP) and help people in community to get started with it.

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)

Placement Cell Coordinator, Indian Institute of Information Technology Raichur Cultural Secretary, Indian Institute of Information Technology Raichur Electronics Club Coordinator, Indian Institute of Information Technology Raichur

Apr 2021 — Nov 2021 July 2020 — Aug 2021 August 2019 — July 2020