

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, price streaming and understood and modified various aspects of the multi-tenant model
- 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

TECHNICAL SKILLS

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

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

Contrast Stretching Improvements

[Github](#)

- Implemented multiple methods to improve performance of Contrast Stretching Operation
- Compared CPU, and multiple GPU implementations with different approaches and shared memory usage to find a better way.
- **Tech Stack:** CUDA, C++

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

[Github](#)

- Understand and Implement a work stealing deque 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++

Designing Components for CNNs on FPGA, Text to Image Generation **Sup.: Dr. CKM, Professor, CSE-IITH**

[Github](#)

- Understand the individual components of a CNN and the operations involved
- Implementation of the convolution, pooling and dense layers in CPU and on FPGA
- Explore possible improvements through multiple techniques
- **Tech Stack:** Python, VHDL, Vivado

DF-GAN, Text to Image Generation **Sup.: Postdoc Researcher, ADSC of Illinois at Singapore**

[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

EDUCATION

Bachelor of Technology - Computer Science and Engineering,

July 2019 — June 2023

Indian Institute of Information Technology, Raichur

CGPA (Current): 8.58/10.00

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

Apr 2021 — Nov 2021

Cultural Secretary, Indian Institute of Information Technology Raichur

July 2020 — Aug 2021

Electronics Club Coordinator, Indian Institute of Information Technology Raichur

August 2019 — July 2020