

Vinod Dalavai

[Portfolio](#) | [LinkedIn](#) | [GitHub](#) | [Leetcode](#)

Location: Rochester, NY, USA
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OBJECTIVE

Highly motivated professional looking to work with an enthusiastic team of engineers, bringing to the table over 4 years of software engineering experience, strong technical skills, and an ability to climb steep learning curves effectively.

AREAS OF INTEREST

Tackling complex backend challenges through the design and implementation of large scale fault-tolerant distributed systems.

TECHNICAL SKILLS

Languages	: Python, Java, Javascript, Ruby, C, HTML, CSS, Shell Script
Frameworks	: Flask, Rails, React.js, Express, Node.js, Spring Boot
Databases	: MySQL, PostgreSQL, MongoDB, Redis, Apache Spark
DevOps	: Docker, Jenkins
Cloud Platforms	: AWS, Heroku
Dev Tools	: Git, Gitlab, Postman, cURL, Grafana, VIM
Web Tech	: JSON, AJAX, REST
Concepts	: Data Structures, Algorithms, Systems Design, API Design, Distributed Systems

EXPERIENCE

Software Engineer Intern

London Stock Exchange Group

May 2023 – Aug 2023
Remote – NYC/Buffalo, NY, USA

- Worked in the API Team that was responsible for building and maintaining APIs.
- *Devised and developed* an internal tool to generate JSON request body based on user input for a financial calculator using **Javascript, HTML, CSS and Handlebars**.
- *Innovated and executed* enhancements to the product by implementing additional features resulting in **reduced human errors and better user experience**.

Software Engineer Intern

London Stock Exchange Group

Aug 2022 – Dec 2022
Remote – NYC/Buffalo, NY, USA

- Worked in the API Team that was responsible for building and maintaining APIs.
- *Designed and developed* an internal tool (ZipComparator) to compare two zip files containing security indices and bonds related data and output the diff to STDOUT using **Java**.
- *Successfully configured and established* the project on **Jenkins** and enhanced its functionality by incorporating custom stages through **Groovy** scripts in the pipeline.
- *Designed and built* a **Python** tool to facilitate bulk data upload by making **API requests** efficiently.
- *Devised* user-friendly **shell scripts** to execute the Python tool in various modes, enhancing client convenience.
- *Resulted* in reduced human errors while comparing zip files (especially large zip files with multiple json files) and more accurate api responses.

Software Engineer - Platforms

Scripbox.com Pvt. Ltd.

May 2021 – Dec 2016
Bengaluru, KA, India

- Served as a backend engineer and individual contributor to the features developed for the Platforms Team.
- *Architected, implemented, and maintained* web services as an individual contributor for customer-facing investment platforms and internal CRM tools utilizing **Ruby on Rails, MySQL, ReactJS, and Redis**.
- *Championed the idea of an automation suite and engineered a robust system* to conduct automated regression testing (employing **Capybara and Rspec**) within **Gitlab CI**. Subsequently, all production deployments hinged on the suite's successful validation, leading to a remarkable **40% reduction in manual testing efforts per release**.
- Took a proactive role in prioritizing and promptly resolving critical, high-impact bugs with a focus on fast turnaround time (**usually under 24 hours**).

- *Designed, developed, and deployed* a secure user authentication flow utilizing **Ruby on Rails and MySQL**, ensuring seamless and reliable access control for the application.
- *Engineered, implemented, and launched* a centralized communications hub service leveraging **Ruby on Rails**, effectively streamlining the dissemination of emails, SMSes, and push notifications.
- Successfully collaborated with external developers from multiple financial institutions while taking ownership of independent responsibilities to fulfill business requirements in developing requested features.

EDUCATION

Rochester Institute of Technology
Master of Science in Computer Science

Rochester, NY, USA
Aug 2021 – May 2024

PROJECTS

Open Source - ory/keto

PostgreSQL, Redis, GoLang, Docker, Git

[Source Code](#)

- Worked in a team of 3 as part of a project for the class *Distributed Systems* at *RIT* while pursuing MS in CS.
- Implemented a **hybrid logical clock (HLC)** for synchronization in a distributed architecture, utilizing **PostgreSQL, Redis, GoLang and Docker** to ensure precise and efficient timekeeping across the system.
- Modified the API responses to accommodate the newly developed HLC timestamps and test extensively with **Postman**.
- The implementation has not yet been merged as of now.

RDT Protocol

Java, Socket Programming, Multi-threading, Make, Networking, TCP/IP, UDP

[Source Code](#)

- Individual project for the class *Foundations of Computer Networks* taken at *RIT* while pursuing MS in CS.
- **Conceived and developed** a protocol that merges the reliability of TCP with the theoretical speed advantages of UDP, resulting in a highly efficient and reliable Transport Layer Protocol.
- Conducted network simulations using **multicast IP** to validate and refine the protocol, and employed **Docker** for iterative testing and continuous development.
- Pragmatically, the new network was not as good as TCP but the project helped me gain a wealth of knowledge about the subject.

Spotify Dataset

Big Data, Python, PostgreSQL, MongoDB

[Source Code](#)

- Worked on this project for the class *Introduction to Big Data* taken at *RIT* while pursuing MS in CS.
- Utilized a Spotify playlist dataset from Kaggle, comprising 64 million records of data.
- Identified and established entities and relationships within the dataset.
- Designed a robust database schema and efficiently loaded 65 million records from CSV files into PostgreSQL in less than 45 minutes.
- Created collections and documents to represent the same dataset in MongoDB, achieving a complete data load within 1 hour.
- Formulated efficient and intriguing queries for both PostgreSQL and MongoDB, enabling a comparison of query execution times and data retrieval ease between SQL and NoSQL databases.
- Employed itemset mining and data cleaning techniques to derive valuable insights and interesting observations related to user playlists.