

# Vinod Sridhar Dalavai

585-710-1636 • Rochester, NY • vd1605@rit.edu • <https://dsvinod90.github.io/dsvinod90>

## PROFILE

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Seeking an internship/cooperative position to work on the design and development of high-quality software systems. 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:** Distributed systems, computer networks, systems application development, software engineering.

## CORE SKILLS

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Java, Python, C, Ruby, Javascript, MySQL, PostgreSQL, Unix, Spring Boot, NodeJS, Rails, CSS, HTML5, Product/system ownership, Data Structures and Algorithms, Object oriented design, API Design, Git, System Design, Shell scripting

## EDUCATION

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**Rochester Institute of Technology** | Master of Science in Computer Science Expected - May 2024  
Rochester, New York.

- **Related coursework:** Distributed Systems, Computer Networks, Advanced Object-Oriented Programming, and Foundations of Algorithms.
- **Highlights:** Received praise for a [presentation about Resilient Distributed Datasets\(RDDs\)](#) for the distributed systems class. Exploring research opportunities/projects in the field with Professor. Mustafa Rafique.

**Siddaganga Institute of Technology** | Bachelor of Engineering 2008 - 2012  
Tumkur, India.

## PROFESSIONAL EXPERIENCE

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**Technology Intern - Data and Analytics** Sep 2022 - Dec 2022  
London Stock Exchange Group | New York, USA

- Design and develop a tool in Java to compare zip files containing security indices and bonds related data
- Setup a Jenkins job to run the ZipComparator as part of the testing pipeline
- Develop a python tool to make API requests for bulk data upload.
- Develop shell scripts to run the above-mentioned python scripts in various modes
- Collaborate with internal development teams to integrate CMO Analytics library and data sets into the Analytics platform.

**Software Engineer - Platforms.** Dec 2016 - May 2021  
Scripbox.com Pvt. Ltd. | Bangalore, India.

- Designed, developed, and maintained web services for customer-facing investment platforms as well as the internal CRM tools.
- Ideated the need for an automation suite and developed the system for performing automated regression testing (using *Capybara* and *Rspec*) in *Gitlab CI*. All subsequent production deployments were contingent on this suite passing.
- Proactively involved in triaging and fixing high-priority, high-impact bugs with a short turnaround time.
- Undertook DevOps responsibilities as the need arose by analyzing system resource utilization using *Grafana* and followed the team-defined protocols in place to resolve errors.
- Reported to scrum manager every week and implemented robust software engineering principles to participate in the full software development life-cycle of internal tools.
- Involved in Sprint Planning Meetings to identify functional requirements, convert them into engineering tasks and estimate timelines for delivery

- Prepared and executed regression test scenarios and test cases of clients' web applications.
- Designed, developed, and executed performance scripts using *HP Loadrunner* and analyzed test results.
- Logged test artifacts and results in *JIRA*.

## PROJECTS

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### Open Source - ory/keto.

Feb 2022 - Apr 2022

**Overview:** Implemented a [hybrid logical clock](#) for providing consistency guarantees across distributed nodes.

**Responsibilities:** • Using *PostgreSQL*, *Redis*, and *GoLang* to implement the hybrid logical clock (HLC) for synchronization in a distributed architecture. • Modify the API responses to accommodate the newly developed HLC timestamps and test extensively with *cURL* and *Postman*.

### Lunar Rover - Network Protocol Development.

Feb 2022 - April 2022

**Overview:** Developed the *RIPv2* protocol and a reliable data transfer protocol from scratch using *Java Socket programming*.

**Responsibilities:** • Designed the *RIPv2* message (packet) header. • Created and updated the routing tables for an arbitrary number of routers using the *Bellman-Ford* shortest path algorithm. • Simulated the network using multicast IP and used *Docker* to test and iteratively develop the protocol. • Also developed and implemented the transport layer protocol similar to the *TCP/IP protocol*.

### Scripbox.com - Payment Gateway Integration

Sept 2018 - Dec 2018

**Overview:** Integrated third-party payment gateways for Scripbox.com's investment platform handling over 30K payments daily.

**Responsibilities:** • Used *Ruby on Rails* to develop the APIs to allow all forms of online payments. • With a focus on security, wrote an extensive test suite using *RSpec* for unit testing. • Performed API tests with *Postman* and followed best practices concerning web and API development. • Collaborated with external developers from various financial institutions and undertook independent responsibilities to meet business requirements.