Sriram Venkatachalam Ramaswamy

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Skeletrox

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https://skeletrox.github.io

sriramvera

Developer with experience and expertise in **distributed systems**, **machine learning** and **distributed databases**. Specialized experience in **Large Scale Distributed Systems** and **Distributed Data Warehouses**. Interests include **intelligent system automation** and **self-reliant systems**.

PROFESSIONAL EXPERIENCE

Amazon Web Services

Software Engineer II, Redshift Data Management
December 2023 – present
East Palo Alto, USA
- **Delivered** Aurora PostgreSQL to AWS Redshift **Zero-ETL** integration
- Delivered **manual sortkey** setting functionality and **automatic sortkeys** for **Zero-ETL** tables, improving Zero-ETL **scan performance.**
- **Modernized** and **migrated** the test environment to Python 3, **mentoring** and **leading efforts** across a **cross-functional** team for this effort
- **Improved test** and **feature stability** for **Autonomics** and **Zero-ETL** components of Redshift

Software Engineer, Redshift Data Management
July 2021 – present
East Palo Alto, USA
- Working on Ease of Use and Autonomics, writing code, tests and dashboards for the feature in **C++** and **Python**
- Developed an automated statistical distribution mechanism for terabyte-scale tables, leading to up to **20% improvement** in performance over >**1 million terabyte-scale tables**
- Developed mechanisms that allowed distributed tables to quickly adapt to changing cluster configurations, relieving customer pain and improving query performance by up to **70%**
- Wrote automated swarm tests and chaos tests that validate cluster behavior over wide varieties of table configurations
- Mentored interns and took on operations as part of the on-call rotation

USC Annenberg Media, *Digital Development Lead*
August 2020 – May 2021
Los Angeles, USA
Migrated a JSP-based website to a React-Powered one.

Amazon Web Services, *SDE Intern, Redshift*
May 2020 – August 2020
East Palo Alto, USA
- Developed a snapshot inspector, an offline tool that leveraged **parallelized distributed processing** in order to verify and validate database backups in S3, reducing **hours** of manual debugging **to seconds** of running a CLI tool.

USC Annenberg Media, *Digital Development Lead*
January 2020 – May 2020
Los Angeles, USA
- **Migrated** code from **JSP** to **React** and **Django** in order to facilitate website expansion, with a **ML stack** to **classify** and automatically **tag** stories.

Aikaan Labs

Network Analytics Engineer
July 2018 – June 2019
Bengaluru, India
- **Designed** and **built** a **machine learning** system that employed **information theory** and **neural nets** to predict edge network behavior
- **Automated** the machine learning stack, leading to a **3300% increase in predcition efficiency**
- Developed **SQL parsers** and telemetry collectors in **Go**

EDUCATION

University of Southern California, *Master of Science in Computer Science*
August 2019 – June 2021
Los Angeles, USA
- **Societies:** ACM
- **Courses:** Foundations of AI, Machine Learning, Applied Machine Learning for Games, Analysis of Algorithms, Foundations of Data Management
- **GPA:** 3.6/4

REVA University, *Bachelor of Technology, Computer Science and Engineering*
August 2014 – May 2018
Bengaluru, India
- **Co-Founder** of **GLUG-REVA**, a forum for FOSS
- **Courses:** Robotics and Automation, Big Data and Hadoop
- **GPA:** 3.76/4

PROJECTS

Tensor Cortex, *Tensorflow distributed over dockers* ↗
July 2020

Musiquity, *Distributed Databases for dynamic song recommendations* ↗
May 2021

Blackjack Bot, *Go-based AI that uses RL to strategize blackjack* ↗
January 2020

Halma Hussar, *C++-based AI that plays checkers* ↗
October 2019

CERTIFICATES

- Oracle Certified Associate in Java Programming ☒

PUBLICATIONS AND ARTICLES

OpenRAP - A Distributed, Scalable, Offline CDN,
International Journal of Advanced Research in Computer Science ☒

Reinforcement Learning - The Fellowship of Las Vegas,
Becoming Human - The Artifical Intelligence Magazine ☒

5:45 AM With Docker, *Medium* ☒
Technical article that details how distributed machine learning can be setup and deployed, even in a single desktop computer.

SKILLS

Python ● ● ● ● ●
Machine Learning, Deep Learning, Testing and Automation

Rust ● ● ● ○ ○
Distributed Programming, Asynchronous applications

C/C++ ● ● ● ● ○
Distributed Databases, Database Internals

SQL ● ● ● ● ○
Data processing, Normalization and Denormalization