

# Sreeram Ganesan

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## EDUCATION

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### Master of Science in Computer Science

Expected May 2023

University of Colorado Boulder, Boulder, CO; GPA: 3.90/4

### Bachelor of Technology in Computer Science

Jul 2018

Amrita School of Engineering, Amrita University, Coimbatore, India; GPA: 3.53/4

## SKILLS

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**Languages:** Java, Python, Go, SQL, HTML, CSS, Javascript

**Frameworks/Libraries:** Spring Boot, Flask, NodeJS, React

**Databases:** Oracle, MySQL, Aurora, MongoDB, DynamoDB, Cloud Spanner, BigQuery

**Tools & Technologies:** RESTful Web Services, Microservices, Cloud Computing, Serverless, Git, Mercurial, Gradle, Jenkins, Docker, Kubernetes, CDK, Terraform, gRPC, Redis, Linux, JAX-RS, Hadoop, Map Reduce, Spark, Functional Programming, AWS, Google Cloud, Authentication, Load balancing, RabbitMQ, Kafka, eBPF, XDP, Apache OpenWhisk

## EXPERIENCE

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### Software Engineering Intern

Aug 2022 - Dec 2022

Google

Boulder, United States

- Designed, developed and released an automated schema roll-out framework which enables Google Cloud and its partners to modify the schema of existing billing exports without any data copy/duplication.
- Automated the feature roll-out process for 170+ Google Cloud partners, reducing the time to roll-out new features from 4 weeks(done manually) to less than a week(completely automated).

### Software Engineering Intern

May 2022 - Aug 2022

Amazon Web Services

Palo Alto, United States

- Architected and engineered an internal tool to automatically validate and rank the Standard Operating Procedures(SOP) for fixing production issues in the Aurora Database using AWS services like Lambda, SNS, SQS and DynamoDB.
- Significantly reduced the time taken to analyze, identify and review SOPs which are crucial for maintaining Aurora in production.

### Software Engineer

Jun 2019 - Jul 2021

Oracle

Hyderabad, India

- Achieved 3X performance gain by developing new microservices with Java to import and export large amounts of data via Excel and other third-party apps. Reduced server cost by 34% compared to the legacy implementation.
- Led a team of three to prototype and construct a novel revenue forecasting solution. Worked closely with product managers to incorporate customer feedback and improved the forecast by 13%.
- Increased productivity by 20% by establishing an automated API documentation process using Swagger plugins.

### Associate Software Engineer

Jan 2018 - May 2019

Oracle

Hyderabad, India

- Created RESTful APIs to configure, generate and export mission-critical reports for R&A, a data analytics tool used by restaurant chains such as Starbucks, Dunkin, KFC, etc to optimize sales, operation costs, inventory, etc.
- Decreased the turnaround time for critical bugs by 41% by re-architecting the legacy modules and their build process.
- Devised a proof of concept for an internal framework to build mobile applications with the web development stack - HTML, CSS and Javascript, which cut down the development time of mobile apps by 45%.

## PROJECTS

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### Accelerating the communication between Serverless functions using RDMA

Ongoing

- Serverless computing is mainly targeted for stateless functions that do minimal I/O and communication. The existing solutions to use Serverless computing for Stateful functions are not very efficient.
- This project achieves high performance inter-function communication by co-locating the functions on the same VM or by using RDMA when the functions are located on different VMs.
- Tech Stack - Python, Shell scripting, Docker, Kubernetes, Apache OpenWhisk

## Efficient data processing using eBPF XDP

Aug 2021 - Dec 2021

- Achieved better performance compared to the existing data-processing systems by processing data at the network layer instead of the application layer as there is a cost to move the data from the file system to the application layer to process them.
- Injected rules using eBPF at the XDP layer (at the kernel level) before the data packets are passed to the application layer.
- Tech Stack - Go, eBPF, XDP, Redis, Kafka, Docker, Kubernetes

## F7 Fitness Hub - Social Fitness Network

Dec 2020 - Jul 2021

- Architected and developed mobile applications for a medium-sized gym to build a community for their clients to virtually participate in various workouts from their mobile.
- Responsible for supporting clients and generating 100% of the revenue for the business during COVID-19 pandemic lockdowns.
- Tech Stack - Java, Spring Boot, MySQL, React Native.

## Revenue Forecasting with Machine Learning

May 2020

- Engineered a system to forecast the revenue of restaurants with Machine Learning. Engineered an ExtraTrees Regressor-based ML model that predicted the weekly revenue of restaurants with a mean absolute error of less than 15%.
- Tech Stack - Python, Flask, Tensorflow, Oracle JET, Oracle Database.

## ACHIEVEMENTS

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**Felicitated by the Minister of Rural Development, Government of India** - Established a beneficiary management application for a government program. Constructed dashboards and reports to measure the impact of the program.

**Inspiration Award** - Awarded by Persistent Systems for winning the Smart India Hackathon.

**Second Runner Up, Honeywell Hackathon** - Developed a chrome extension for personalised product recommendation.

## CERTIFICATION

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**Oracle Cloud Infrastructure Foundations 2020 Certified Associate (08/2020)**