

# Harshith Sesham

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## PROFESSIONAL EXPERIENCE

### Amazon, Seattle, WA: Software Development Engineer

Aug 2023 - Present

- Developed a back-end for a self-serve blueprint configuration tool utilizing Java, DynamoDB, and Coral endpoints, hosted on Amazon EC2, automated blueprint updates for live events, resulting in **\$5M+ savings** in manpower costs
- Collaborated with **cross-functional** teams to create infrastructure for automated live event broadcasts (NBA, MLB, tennis), contributing to a **\$100M** broadcast deal
- Introduced a shadow testing strategy, improving system resiliency by 25%, adopted by 30+ Amazon teams, enhancing cross-team stability and risk mitigation
- Launched 15+ risk message systems in the new Galileo framework, tailored for diverse locations and slots on Prime, resulting in measurable gains in **user retention**
- Resolved high-severity (SEV-2) tickets during **on-call** rotations, reducing on-call workload and maintaining the team's ticket count **below 10** for high operational visibility and efficiency

### Spurcrock, Houston, TX: Software Engineer

Jan 2023 - Aug 2023

- Collaborated on developing **controllers, Interfaces** and **implementation** classes using **Spring MVC** framework & used **Microservice** architecture with **Spring Boot-based** service through **REST**
- Created and injected Spring services, Spring controllers, and DAOs to achieve dependency injection and to wire objects of business classes
- Integrated RESTful and GraphQL APIs using JavaScript, facilitating seamless data exchange and reducing data retrieval times by 15%

### Rice University, Houston, TX: Teaching Assistant

Aug 2022 - Dec 2022

- Curated challenging and engaging assignments and exams to enhance students' understanding of advanced algorithmic concepts for a class of 60 students

### Tata Consultancy Services, Houston, TX: Software Development Intern

Feb 2022 - Aug 2022

- Constructed a web application in Java to support business analysis through interactive data visualizations, driving a **10%** improvement in data-driven decision-making for a healthcare company
- Engineered service features for business alignment and data requests, reducing request volume by **60%** and improving operational efficiency
- Focused on Spring bean wiring, Spring DAO, and Spring AOP modules, implementing Spring AOP for exception handling, which reduced development time for managing exceptions

## RELEVANT PROJECTS

### Social Media Application

Jan 2022 - Mar 2022

- Built and hosted a full-stack Facebook-like web application using React.js for the frontend, Node.js for the backend, and MongoDB as the database on Heroku

### A Multi-Modal Vision and Language Model to Detect Harmful Social Media Memes

Jan 2022 - Mar 2022

- Proposed leveraging OpenAI's CLIP model to enhance the understanding of multimodal hate speech and benchmark its performance against state-of-the-art models from the Facebook AI community

## EDUCATION

### Master of Science in Computer Science

Aug 2021 - Dec 2022

Rice University, Houston, TX

### Bachelor of Technology in Computer Science

Jul 2017 - Jun 2021

Amrita Vishwa Vidyapeetham, Kerala, India

## TECHNICAL SKILLS

**Microservices:** Spring Boot, RESTful Services, Docker, Kubernetes, IP, TCP, DNS, Debian distributions

**Cloud Infrastructure:** AWS, EC2, ECS, IAM, SQS, CloudWatch, Lambda, API Gateway, S3, HEX, Microsoft Azure, Azure Machine Learning Service, Azure Databricks, SQL, Cosmos DB, Terraform, Kubernetes, CI/CD, CloudFormation, GitLab CI, junit, ServiceNow

**Programming Languages:** Java, JavaScript, TypeScript, Python, R, Scala, C, C++, C#, Bash, Golang, Ruby, AJAX, Vue

**Web Technologies:** HTML, CSS, XML, JavaScript, JSP, Angular, Backbone JS, Node JS, jQuery, ReactJS, Express, Bootstrap, .NET

**Databases:** PostgreSQL, Microsoft SQL Server, Oracle, AWS DynamoDB, Amazon RDS, Azure SQL, MongoDB, NoSQL