

# VENKAT SRINIVASA RAGHAVAN

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## EDUCATION

### Northeastern University

Jan 2023 - April 2025

*Master of Science in Data Science, GPA: 4.0/4.0*

*Boston, MA*

Coursework: Algorithms, Machine Learning, Data Mining, Deep Learning, LLMs, Cloud Computing.

### R.V College of Engineering

Aug 2016 – Aug 2020

*Bachelor of Engineering in Electronics and Instrumentation*

*Bengaluru, India*

Coursework: Coursework: OOPS, Graph theory, Java, Algorithms, Discrete Mathematics.

## SKILLS

**Programming Languages:** Python, Java, C#, C++, JavaScript (React, Angular), Node.js, .NET, SpringBoot, Bash.

**Systems & APIs:** RESTful, GraphQL, Distributed Systems, Linux, Kafka, Elasticsearch, LogStash, Git.

**Cloud & Databases:** AWS, Docker, Kubernetes, Jenkins, PostgreSQL, Redis, MongoDB

## EXPERIENCE

### Fidelity Investments

Jan 2024 – Jul 2024

*Software Data Engineer*

*Boston, MA*

- **Tactical Data Capturing Team:** Led efforts in web scraping, data transformation, data loading, and managing ETL workflows while enhancing data quality using machine learning models for automated checks and anomaly detection.
- Led a team of 3 to design and implement an email mining framework with **FastAPI**, **Snowflake**, and **SQS**, achieving a 6x increase in processing speed by optimizing ETL workflows and ensuring seamless data integration.
- Developed a multithreaded data retrieval system with Playwright and **Python**, reducing runtime from **190 to 18 hours** and improving efficiency by **95%**, while the team built an **AWS S3** to Snowflake pipeline enabling hourly loads.
- Increased company alpha by **40%** by building a GPT-4 RAG system to process **9,600 files**, deployed with **Docker** and **Kubernetes** on **Linux EC2**, using Snowflake pipelines and stored procedures for data change detection.
- Improved scraped data quality by 75% by developing a **time series** anomaly detection model to monitor data content.

### Airbus

June 2020 – Dec 2022

*Full Stack Software Engineer*

*Bengaluru, India*

- **Methods and Tools:** Managed aircraft system software and built tools to improve operability and efficiency. Developed analytics software for hardware data and enhanced flight testing through Agile application development.
- **Optimized SQL Server** stored procedures, functions, and views, cutting processing time from **12 to 4 hours**. Built an inter-server **data migration pipeline** with **SSIS** and **C#**, to integrate the data with the analysis dashboard.
- Increased system reliability by 70% by building a **C++** and Angular 2.0 HMI for managing aircraft hardware systems.
- Optimized **SQL** data management in a document editor using a **doubly linked list**, ensuring **99.9% uptime** and 80% efficiency gain. Built with **.NET microservices** and **Angular** for scalability and robustness.
- Increased business efficiency by 40% through event-based collaborative editing with JWT authentication and deployed the solution on **OpenShift** using Docker, managing **CI/CD** pipelines for scalable and secure network access.

## PROJECTS

**CodeQuest** | *Java, Microservices, PostgreSQL, React.js, TailwindCSS, Docker, AWS*

May 2024 – Oct 2024

- Developed a robust platform for real-time code evaluation with a sandboxed environment and automated feedback.
- Deployed the platform on AWS using ECS, RDS (PostgreSQL), S3, and CloudWatch for scalability and monitoring.

**CodeSage** | *LLM's, Microservices, Python, FastAPI, GPU, Quantization, NLP*

Sept 2024 – Dec 2024

- Developed an automated code review system using fine-tuned LLMs, achieving a ROUGE score of 0.68.
- Integrated the system into CI pipelines via GitHub Actions, enhancing performance with Quantization and LoRA.

**Real-time Online Multiplayer Chess** | *React, .NET, SignalR, Redis, Azure, Terraform*

Aug 2024 – Nov 2024

- Built a real-time chess platform with microservices using SignalR and Redis for seamless gameplay synchronization.
- Automated Azure deployment with Terraform, ensuring scalability and high availability for the platform.

## LEADERSHIP & AWARDS

- Secured **3rd place** out of 50+ teams at Kaggle's 2023 Datathon by developing an ML model to predict credit lines.
- Ranked in the **top 400** of 25000 participants in the November LeetCode Competitive programming championships.
- Three time **champion** with Northeastern University in the National Badminton Championships.
- Certifications: **AWS** Cloud Foundations and Architecture, Hackerrank – SWE, Problem Solving, SQL.