




# SHRAVANTH REDDY REDDY

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## EDUCATION

### University of Dayton

*M.S. in Computer Science*

Dayton, OH

*Aug 2022 – May 2024*

- **Coursework:** Algorithm Design, Advanced Programming and Data Structures, Database Management Systems, Operating Systems, Secure Application Development, Data Science Pattern Recognition

## SKILLS

**Languages:** Python, Java, JavaScript/Typescript(ES6+), Swift, C, GoLang

**Web Development:** HTML, CSS, ReactJS, Next.js, Spring, Spring boot, Spring Security, RESTful APIs, GraphQL, NodeJS

**Databases:** MySQL, SQL, NoSQL, MongoDB, SQL Server, PostgreSQL

**Tools:** Visual Studio Code, IntelliJ IDEA, Eclipse IDE, Jupyter Notebook, Google Collab, Informatica, Tableau, Power BI

**Project Management Tools:** AWS (EC2, S3, CloudWatch, Auto Scaling, Elastic Load Balancer), Docker, Kubernetes, Jenkins, Git, Github

## WORK EXPERIENCE

### University of Dayton

*Information Technology Student Worker*

Dayton, OH

*Nov 2022 - Jan 2024*

- Revamped Degreeworks with **React Native**, introducing a modern, mobile-friendly design for the Responsive Dashboard improving user experience, academic advising efficiency, and communication between faculty and students.
- Automated the deployment of new features and bug fixes using a DevOps pipeline with **Jenkins** and **Docker** increasing the uptime of the University's learning management system Isidore.
- Leveraged **Spring Boot** for data retrieval and processing, enhancing communication between front-end and back-end reducing the latency by **20%** by caching using **Redis**.
- Streamlined virtual machine deployment, significantly reducing setup time by implementing a **Bash script** that automates the installation of essential tools achieving **40% time savings** on initial configurations, optimizing efficiency.
- Integrated AWS services like **Amazon CloudWatch**, **Auto Scaling**, **Elastic Load Balancing (ELB)** for enhanced application performance
- Configured a structured **Oracle database** with **Java Persistence API** for organized data storage and retrieval.

### Amazon Development Centre

*Software Development Engineer I*

Hyderabad, India

*July 2019 – July 2022*

- Spearheaded the development of the **Mystiq Portal** with **React.js**, developing various components and successfully delivering the project without any bugs, improving the efficiency of the brand protection team in protecting various brands enrolled in the brand registry.
- Implemented data quality checks and validation routines, leveraging **AWS CloudWatch** and **SNS** for real-time monitoring and alerting; minimized data discrepancies by **40%** and ensured the integrity and accuracy of critical data.
- Collaborated closely with senior SDEs, PMs, and SDMs to streamline CI/CD pipelines for orchestration, and enhanced deployment on **AWS EC2**, resulting in a **15% increase** in application **uptime** and improved scalability, resilience, and resource utilization.
- Engineered **RESTful APIs** using **Spring Boot**, incorporating **Java 8** features such as **lambdas** and **streams** to enhance code readability and maintainability.
- Integrated **advanced Spring Boot configurations**, resulting in a **20%** increase in overall system responsiveness which translated into reduced response times, with **critical API calls** experiencing a **decrease** from **>1s** to **<800ms**
- Involved in designing and developing user interface(UI/UX) for web pages using **HTML 5**, **CSS3**, **typescript**, **Bootstrap**, **SASS**, **React JS**, and **Redux**
- Engineered a solution to rectify a **critical performance issue** in the catalog import process, resulting in a **98% reduction** in **PostgreSQL** query execution times for job instances—from **> 60 minutes** to approximately a **minute**—upon implementing a strategic configuration change.

## PROJECTS

- **transcribgpt - Next.js, Node.js, OpenAI APIs:** Developed and launched transcribGPT, an application leveraging Whisper API for audio transcription and GPT-3.5 API for real-time question answering. Designed a chat-like interface allowing users to inquire about audio/video content, with the entire transcript converted to embeddings using OpenAI embeddings API.
- **Campus Feedback Application - Deployment using CI/CD - Full Stack:** Built full-stack applications with Angular frontends and RESTful Spring Boot backends, seamlessly integrated using RESTful APIs. Ensured secure data storage with JDBC/JPA and enhanced performance with Docker containerization and Kubernetes optimization. Streamlined CI/CD through Jenkins pipelines and Dockerfiles.
- **Bias Detection in ChatGPT:** Conducted in-depth bias detection research on ChatGPT, employing the Bias Protection Rate (BPR) metric and a hierarchical analysis approach. Developed and executed a systematic methodology, involving tailored question generation, Python script-based response collection, and dual evaluation with automated and manual Bias Protection Rating scales.

## LEADERSHIP EXPERIENCE

- **Teaching Assistant, University of Dayton:** Delivered a range of teaching and assessment activities including tutorials and help sessions for Data Science Pattern Recognition coursework. Provided project feedback and guidance to 100+ students.
- **President, Rotaract Club of St. Peter's Engineering College:** Served as the President of a Rotaract Club with 160 members, leading strategic planning and execution of impactful community projects. Orchestrated "Paint the Future," a community project for painting a rural government school, and led "Technology Conclave," a notable event with CEO speakers discussing technological innovations.