Sai Manukonda

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Education

Rutgers University • **New Brunswick, NJ** — Expected Graduation: May 2025
Bachelor of Science, Major - Computer Science, Minor - Mathematics — Major GPA: 3.6/4.0

- **Computer Science Coursework:** Data Structures, Computer Architecture, Systems Programming, Discrete Structures $I - II$, Design and Analysis of Algorithms, Introduction to Artificial Intelligence
- **Mathematics Coursework:** Calculus $I - IV$, Linear Algebra, Linear Optimization, Intermediate Statistical Analysis

Skills

- **Languages:** Python, Java, R, HTML/CSS, JavaScript, MATLAB, C, C++
- **Frameworks:** React, React Native, Express and Node.js, Flask, Bootstrap
- **DevOps/DB:** SQL, MongoDB, Docker, GraphQL, Kubernetes
- **Machine Learning:** Numpy, Pandas, Matplotlib, TensorFlow, Pytorch, SciKit-Learn, Sentence Transformers, NLTK, Jupyter

Work Experience

Capital One – McLean, VA — June 2024 – August 2024
Software Engineer Intern

- Incoming Summer 2024 Technology Internship Program.

MathWorks – Natick, MA — May 2023 – August 2023
Software Engineer Intern

- Developed a scalable, user-centric dashboard application using **React**, **Node** and **MySQL** in collaboration with the Industry Model Testing (IMT) team, integrating advanced data visualization for self-driving vehicle industry models.
- Engineered a **Convolutional Neural Network (CNN)** to enhance lane-changing decision-making in self-driving vehicles, involving preprocessing of diverse lane-changing scenarios.
- Achieved a **12% improvement** in decision-making accuracy for autonomous vehicles through the optimized CNN model, significantly enhancing safety and reliability in autonomous navigation systems.
- Managed tasks and sprints using JIRA, effectively applying **Agile** methodologies for streamlined project execution and team collaboration.

Quiddity Infotech – Little Elm, TX — May 2022 – August 2022
Software Engineer Intern

- Built an internal HR platform using **React** and **Express**, with **GraphQL** to automate onboarding, interviewing, & communications processes.
- Utilized the **Microservice design pattern**, creating a microservice for each HR process and event bus for pub/sub inter-service communication.
- Dockerized the platform and deployed it on a Kubernetes cluster for smooth deployment across different environments.
- Successfully replaced external HR/Time tracking solutions, resulting in **annual cost savings of over $5000** in licensing fees.

Code Ninjas – Princeton, NJ — September 2019 – January 2020
Coding Instructor

- Instructed 50+ students aged 7-14 in programming and robotics, fostering a challenging and collaborative learning environment
- Adapted curriculum to cover game and website development using **JavaScript**, as well as **IOS app development**

Projects

Emaily – Node.JS, Express, React.JS, MongoDB — @Emaily

- Created a survey management system for companies and organizations to send out and view customer survey statistics
- Incorporated Google OAuth for secure authentication through Mongoose.js
- Integrated Stripe API for payment processing, with a 2-cent cost per email sent to the user/customer

Anime Central – Flask, Beautiful Soup, Python, HTML/CSS/JS — @Anime-Central

- Collected data on 3300 Anime titles from 1980 to 2021 using Wikipedia API, and stored information in a JSON file
- Organized the Anime titles into categories such as genres, release year, and ratings, allowing users to view similar titles
- Implemented a cookie session to store the user's watch history and preferred Anime genres
- Built a recommendation system based on four metrics, including recently watched Anime, most liked genre, release year, and production studio

Mirror Dashboard – Python, HTML, google-cloud, raspberry-pi — @MirrorDashboard

- Designed a solution to keep users updated on current events, even with limited network connectivity
- Monitored internet access and periodically updated information from a Google Cloud Compute Engine
- Extracted important content including first aid, weather, and breaking news from sources such as CNN
- Automatically redirected users to the information site when connected to the Raspberry Pi Wi-Fi hotspot