Simon Varadaraj

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EDUCATION

Texas A&M University - Grad. May 2025

Bachelor of Computer Science with Honors | Minor in Business | GPA: 3.87 / 4.00 | Dean's List

- Relevant Coursework: Data Structures and Algorithms, Discrete Math, Linear Algebra, Principles of Statistics II, Analysis and Design of Algorithms, Computer Organization, Artificial Intelligence

JOB EXPERIENCE

Data Analyst Intern - *May 2023 - July 2023*

HCA Healthcare | Dallas, TX

- Leading several data migration projects at HCA's North Texas Branch, aiding the migration of **70 TB** of critical patient data and client-side web applications using **SSIS** and **SQL**.
- Developed optimized queries involving **multiple joins**, **subqueries**, and **aggregate functions** which extracted information up to **15% faster** than prior implementations.
- Actively managed and maintained **over 50 production databases**, ensuring high availability, performance, and data integrity in a mission-critical environment.

PROJECTS

Tradem. - January 2023

- **Led a team of 4 engineers** who launched a web platform that allowed college students to trade unwanted items to prevent unnecessary waste around campuses.
- Designed the UI of the application through **Figma**; implemented the front-end via the **React** framework. Implemented backend with **Flask**, **Microsoft Azure**, and **SQL**.
- **Out of 150+** submitted projects, Tradem was selected as a winner for TAMUhack 2023, one of Texas' largest hackathons.

Credit Card Fraud Detection - May 2023

- Acquired and cleansed data with **pandas** and **sklearn** in order to create a **stochastic gradient descent** model to accurately prevent fraudulent transactions on credit card purchases.
- Employed **random oversampling** in order to create a balanced test set, in order to **eliminate risks of overfitting** due to the heavily imbalanced classification in the dataset.
- Hyperparameter tuning on the model, leading to a **87.6% accuracy** on the test dataset, after accounting for overfitting.

Holocalc - June 2022

- **Python** application that tracks a user's finger position using the **OpenCV** library and **Google Mediapipe**, and uses the data to input onto a functional on-screen calculator.

TECHNICAL SKILLS

Languages: Python, Javascript, C++, Java, SQL, R, HTML/CSS

Frameworks/Technologies: Git, Linux, React.JS, Figma, SSIS, Microsoft Azure, Microsoft Office, OpenCV, Keras, Numpy, Matplotib, Pandas, Anaconda, Web Scraping, Sklearn, LaTeX

Certifications: AZ-900 : Azure Fundamentals (Microsoft), React.JS Essentials (Linkedin)

INVOLVEMENTS

Act to End Sex Trafficking and Abuse | *Events and Philanthropy Chair*	**August 2022 - Present**
TAMU UNICEF | *Webmaster*	**August 2022 - Present**
TAMUHACK | *USAA Challenge Award Winner*	**January 2023**
Engineering Honors Executive Board	**April 2023 - Present**