

Tofik Hamscho

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EDUCATION

The University of Texas at Austin	Bachelor of Science, Mechanical Engineering Computer Science Certificate GPA: 3.97/4.00	May 2025
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Relevant Coursework Data Structures and Algorithms, Engineering Computational Methods, Elements of Web Programming, Machine Learning and Data Mining

TECHNICAL SKILLS

Languages: Python, JavaScript, PHP, HTML/CSS, SQL, Java

Tools/Libraries: Pandas, Selenium, NumPy, Matplotlib, BeautifulSoup, OpenCV, OpenAI, scikit-learn, MySQL, AJAX, jQuery

Developer Tools: Git, VSCode, Google Cloud Platform, Jupyter Notebook, Prometheus, Grafana, Docker, Kubernetes

TECHNICAL EXPERIENCE

American Express – *Software Engineering Intern*, Phoenix, Arizona **June 2024 – August 2024**

- Deployed functions using Java and the Micrometer library to expose detailed endpoint metrics for my team's enterprise microservices
- Utilized Prometheus to scrape metrics from 40 targets, including Docker daemons and Kubernetes pods for comprehensive observability
- Created Grafana dashboards for real-time system reliability displays, enabling continuous monitoring by onshore and offshore teams
- Integrated immediate alerts for warnings through Slack and email via my dashboards to the Reliable Transaction Framework team

Dell Technologies – *Data Analytics Intern*; Austin, Texas **June 2023 – August 2023**

- Developed a dashboard in PowerBI that captured updated requirements from the Core and Extended teams in Global Operations
- Conceptualized a mathematical formula to calculate weekly workload capacity for six engineers in the Design for Manufacturing team
- Automated data cross-functionality between SQL queries and PowerBI to establish live and dynamic visualizations
- Utilized AGILE metrics to improve current and future project management planning for subject matter expert platform assignments

PROJECTS

LPL Autonomous 1.0 – *JavaScript, MongoDB, Node.js, React* **January 2024**

- Engineered a modern backend using JavaScript to enable robust connections and ChatGPT API integration for an AI chatbot
- Developed a dynamic frontend using React, implementing login and sign-up features protected with HTTP and JWT cookies
- Implemented MongoDB for efficient data management, securely storing user information and chatbot interactions for future logins

Gesture Gate: Dynamic Hand Gesture Recognition – *Python* **August 2023**

- Built a Python-driven system with OpenCV and cvzone libraries to instantly identify hand gestures from live camera video.
- Introduced dynamic resizing to ensure consistent model input, optimizing prediction accuracy regardless of hand orientation.
- Trained a machine learning model with over 200 hand images, facilitating quick model updates and label changes.

Yet Another Website Scraper – *Python* **June 2023**

- Crafted a Python tool to scrape and filter Times Jobs listings, saving relevant postings to text files that refreshed every 24 hours
- Utilized BeautifulSoup and requests for HTML parsing, extracting job details and filtering out listings that required unfamiliar skills
- Streamlined the job search process, allowing for targeted applications to positions best aligned with my skill set

LEADERSHIP EXPERIENCE

Society of Hispanic Professional Engineers – *Recruitment and Retention Lead* **August 2021 – Present**

- Promoted academic and professional networking in bi-weekly general meetings with over 250 attendees
- Organized five recruitment and retention events around the city of Austin for over 30 UT SHPE chapter members
- Charted more than 10 outreach programs per year to prospective engineering Hispanics coming to UT Austin

AWARDS & AFFILIATIONS

• Benjamin A. Gilman International Scholar **May 2022 – Present**

• Cockrell Distinguished Engineering Honors **August 2021 – Present**

• Hispanic Scholarship Fund Scholar **June 2021 – Present**