

# Tofik Hamscho

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## EDUCATION

<b>The University of Texas at Austin</b>	Bachelor of Science, Mechanical Engineering Elements of Computer Science Certificate GPA: 3.98/4.00	<b>May 2025</b>
<b>Relevant Coursework</b>	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, MATLAB

**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**

- Utilized Prometheus to scrape metrics from 40+ targets, including Docker daemons and Kubernetes pods for comprehensive monitoring
- Deployed 5 functions using Java and the Micrometer library to expose detailed endpoint metrics for enterprise microservices
- Created 20+ Grafana query panels for real-time system reliability displays, enabling 24/7 monitoring by onshore and offshore teams
- Processed 80+ immediate alert warnings through Slack and email via my dashboard to the Reliable Transaction Framework team

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

- Developed a dashboard in PowerBI that captured 100+ Jira requirements from the Core and Extended teams in Global Operations
- Automated data cross-functionality between 20+ SQL queries and PowerBI to establish live and dynamic visualizations
- Conceptualized a mathematical formula to calculate weekly workload capacity for six engineers in the Design for Manufacturing team
- 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**

- Trained a machine learning model with 200+ ASL hand images, facilitating quick model updates and label changes.
- 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.

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

- Crafted a Python tool to scrape and filter 1000+ total job 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 with 90% accuracy
- 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**

- Charted the logistics of 10 outreach programs per year to prospective engineering Hispanics coming to UT Austin
- Organized 5 recruitment and retention events around the city of Austin for 30+ UT SHPE chapter members
- Promoted academic and professional networking in bi-weekly general meetings with 250+ attendees

## AWARDS & AFFILIATIONS

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

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

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