

Ashkan Arabi

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EDUCATION

Bachelor of Science, Computer Science
The University of Texas at El Paso

December 2025
GPA: 3.93

EXPERIENCE

Capital One: Software Engineering Intern

June 2025 - August 2025 | McLean, VA

- Built & deployed anomaly-detection pipeline for Capital One's card decisioning system, notifying SREs of malfunctioning ML models and reducing incident-response time **from 4+ hours to <15 mins**.
- Wrote highly optimized **Databricks SQL** & evaluated warehouse sizes to minimize pipeline cost & latency.
- Extended **Java**-based plugin to log custom **Apache Spark** data lineage events using a YAML specification.
- Applied **test-driven development** using **JUnit** and **Mockito** to ensure robust, maintainable code.

GNOME Foundation: Open-Source Contributor

December 2023 - June 2024 | Remote

- Implemented timer editing and full-screen timers in GNOME Clocks, **used by 40+ million** to track time.
- Opened **3 PRs**, reviewed code with maintainers, and merged my **GTK + Vala** components.

UTEP Vision and Learning Lab: Undergraduate Research Assistant

January 2024 - May 2024 | El Paso, TX

- Contributed to creation of autistic vs neurotypical speech classifier by creating synthetic training data.
- Built tone-changer by fine-tuning **HuggingFace** models to change normal tone to autistic.
- Implemented neural style-transfer model in **PyTorch** to explore usage for accent-changing.
- Increased evaluation script performance by **144x** reimplementing KNN in PyTorch to utilize GPU.

Temple University: Research Intern

June 2023 - July 2023 | Philadelphia, PA

- Published paper in **ACM MobiHoc** about using Wi-Fi CSI for hand gesture recognition on smartphones.
- Developed CNN model to classify 5 gestures in 6 scenarios using **TensorFlow** with **>90% accuracy**.

PROJECTS

Docker Exploit Manager | JavaScript, Svelte, Python, Docker, Neo4j, Trivy, Grype, Dockle, Metasploit

- Created full-stack application to streamline Docker container exploit assessments for DEVCOM testers.
- Automated container security scans with **Trivy**, **Grype**, **Dockle** to enumerate CVE-referenced vulnerabilities.
- Developed interactive topology map using **Docker API**, **Nmap**, & **Neo4j** for container discovery.
- Orchestrated automated penetration tests using **Metasploit** to identify and validate exploitable flaws.

hackerhunt.tech | Python, Django, React, TypeScript, Nginx, Docker, AWS SES

- Democratized collaboration by making a platform for students to find collaborators for technical projects.
- Minimized costs by self-hosting HTTPS page using **Nginx**, **Docker Compose**, and manual DNS setup.
- Raised **\$1000 in pre-seed funding** for market validation advertisements, helping to get **30+ beta testers**.

Newsbridge (news.ashkan.zone) | FastAPI, React, PostgreSQL, JavaScript, Docker

- Increased access to diverse news by creating an AI RSS news translator & orator with **55 GitHub stars**.
- Ensured load-balancing & scaling capacity by using a **Docker Compose microservice architecture**.

LEADERSHIP & ACTIVITIES

President & Founder - FOSS Club

December 2023 - March 2025

- Founded UTEP's first open-source club, growing to **264 members** & organizing **47 technical workshops**.

SKILLS

Coursework: data structures and algorithms, operating systems, parallel computing, deep learning, machine learning,

Languages: Python, Java, JavaScript, TypeScript, SQL, Go (Golang), Dart, Vala, HTML/CSS, Bash shell,

Libraries: ReactJS, PyTorch, TensorFlow, scikit-learn, NumPy, Django, JUnit, FastAPI, Flask, Spring Boot,

Tools: Linux, Git, GitHub, Docker, AWS, Google Cloud(GCP), MongoDB(NoSQL), PostgreSQL, MySQL, Kafka, Cursor,