Ashkan Arabi

(915) 888 - 9801 • aarabimian@miners.utep.edu • /in/ashkan-arabi • github.com/AshkanArabim

EDUCATION

Bachelor of Science, Computer Science   December 2025
The University of Texas at El Paso   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.

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.
- Implemented secure SSH tunnel connectivity with automated checkpoint recovery within **10** seconds.
- 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
- Scaled UTEP's first open-source-focused student organization from **0 to 264 members in 3 semesters**.
- Organized **47 workshops, personally presenting 20**, covering topics such as Git, Linux, & Kubernetes.

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,