ASHKAN ARABI

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EDUCATION

Bachelor of Science in Computer Science, Mathematics Minor Graduating 05/26
University of Texas at El Paso, El Paso, TX GPA: 3.95
 Major GPA: 4.00

Relevant coursework: Object-Oriented Programming, Data Structures and Algorithms, Operating Systems , Matrix Algebra

EXPERIENCE

Information Technology Intern: Texas Instruments, Dallas, TX May 2024 - August 2024
- Set up infrastructure for **fab transporter robots** by configuring **Docker** containers on Linux servers.
- Ensured system reliability through unit and integration testing with Insomnia.
- Coordinated with 10+ sysadmins & stakeholders to configure Oracle **SQL** databases and internal APIs.

Open-Source Contributor: GNOME Foundation, Remote December 2023 - June 2024
- Collaborated with software engineers in development of GNOME Clocks; **used by thousands of Linux users** to track time.
- Added features such as full-screen timers and timer editing (link to video demo ↗).
- Fixed timers not progressing during system suspend by revising timer logic.
- Added functionality to world clock to show country and state when two cities have the same name.

Undergraduate Research Assistant: UTEP, El Paso, TX January 2024 - May 2024
- Contributed to creation of Autistic vs neurotypical speech classifier by using generative AI to synthesize training data.
- Developed an **accent-changer model** ↗ able to convert foreign English accents to native using **HuggingFace** pretrained AI/ML models through their **Python** API.
- Implemented a **neural style-transfer model** ↗ in **PyTorch** to learn PyTorch & explore usage for accent-changing.
- Reduced evaluation script runtime **from 24+ hours to 10 minutes** by rewriting loops as higher-dimension tensor operations.

Volunteer Researcher: UTEP, El Paso, TX August - October 2023
- Contributed to the development of software for training users' weaknesses in spotting Phishing emails.
- Classified emails across 7 phishing attributes with 78% accuracy by developing multi-output NLP classification model.
- Preprocessed and visualized more than 5 datasets using **and NLTK** to use as training material for model.

Undergraduate Research Intern: Temple University, Philadelphia, PA June - July 2023
- Wrote **first-author publication** ↗ presented at ACM MobiHoc about using Wi-Fi CSI for hand gesture recognition on phones.
- Developed CNN architecture to classify 5 gestures from 4 people in 6 scenarios using **Keras**.
- Obtained >90% classification accuracy by using techniques such as LR Scheduling.
- **1st place** for the best REU site final presentation.

PROJECTS

blog.ashkan.zone ↗ August 2024
- Created a blog to share useful programming and life tips as I learn them.
- Used **React.JS**, **TypeScript**, and **Tailwind CSS** to quickly bring my design to life, and **Gatsby** to add Markdown support.

CLI Car Dealership ↗ April 2024
- Wrote an Object-Oriented car dealership software in **Java** following MVC architecture & OOP design patterns.
- Used Git & GitHub features such as pull requests, merges and branches to work in team of 3.

Pong for MSP430 ↗ November 2023
- Designed and implemented a **C** Pong game for MSP430, with paddle movement, ball physics, and score tracking.
- Achieved 30+ FPS gameplay by using partial framebuffer updating instead of redrawing whole screen.
- Integrated buzzer audio feedback for game events such as ball-wall collisions and score updates.

LEADERSHIP

President & Founder - Free and Open Source Software Club at UTEP ↗ December 2023 - Present
- Recruited team of 6 officers to host weekly workshops on git, Linux, Vim, open-source software development, and more.
- Hosted UTEP's **first open-source hackathon**, OpenHack, attended by more than **12 first-time contributors**.

Treasurer - Association for Computing Machinery at UTEP August 2022 - January 2024
- Held the Sun City Hackathon; a three-day competition attended by **more than 20 students** to develop AI-powered apps.

SKILLS

Languages: Python(advanced), Java(advanced), Vala(mid), HTML/CSS(mid), JavaScript(mid), TypeScript(mid), UML(mid), Bash shell scripting(mid), Haskell(mid), SQL(novice), C++(novice), C(novice),
Tools: Unix/Linux(advanced), Git(advanced), PyTorch(mid), NumPy(mid), ReactJS(mid), Pandas(mid), Docker(novice),