ASHKAN ARABI

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EDUCATION

Bachelor of Science in Computer Science, Mathematics Minor <div align="right">Graduating 05/26</div>
University of Texas at El Paso, El Paso, TX <div align="right">GPA: 3.95</div>
<div align="right">Major GPA: 4.00</div>

Relevant coursework: Machine Learning, Object-Oriented Programming, Data Structures & Algorithms, Matrix Algebra

SKILLS

Languages: Python(advanced), Java(advanced), Vala(mid), HTML/CSS(mid), JavaScript(mid), UML(mid), Bash shell scripting(mid), Haskell(mid), LaTeX(novice), C++(novice) , C(novice), SQL(novice)
Tools: Linux(advanced), Git(advanced), GTK(mid), PyTorch(mid), TensorFlow(mid), NumPy(mid),Pandas(mid),Matplotlib(novice)

EXPERIENCE

Information Technology Intern: Texas Instruments, Dallas, TX <div align="right">May 2024 - present</div>
- Set up infrastructure for **fab transporter robots** by setting up **Docker** containers from another department.
- Coordinated with 10+ automation engineers and sysadmins to configure Oracle databases and internal APIs.

Open-Source Contributor: GNOME Foundation, Remote <div align="right">December 2023 - present</div>
- 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. (in progress)
- Fixed timers not progressing during system suspend by revising timer logic. (merged)
- Added functionality to world clock to show country and state when two cities have the same name. (open)

Undergraduate Research Assistant: UTEP, El Paso, TX <div align="right">January 2024 - May 2024</div>
- 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 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.

Undergraduate Research Intern: Temple University, Philadelphia, PA <div align="right">June - July 2023</div>
- 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

Bombshell - UNIX shell written in Python ⬀ <div align="right">April 2024</div>
- Added features like pipes, redirection, and background tasks by using multi-threading and semaphores, ensuring concurrency.

CLI Car Dealership ⬀ <div align="right">April 2024</div>
- 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 for to work as member of a team of 3.

Linux Timer ⬀ <div align="right">January 2024</div>
- Developed a **Linux** timer application using **GTK & Vala**, using an event-driven architecture.
- Implemented functionalities for starting, pausing, resetting, and editing timers, using different GTK4 widgets & signals.

Advent of Code 2022 - Annual Programming Challenge ⬀ <div align="right">August 2023</div>
- Coded **C++** solutions to 12 of 25 challenge questions using backtracking, graph traversal algorithms, and more.
- Used classes, queues, vectors, and streams to efficiently calculate results based on given inputs.

Tic Tac Toe Web Application ⬀ <div align="right">Fall 2022</div>
- Developed a web-based tic-tac-toe application using **HTML, CSS, and JavaScript**, with a special focus on the visuals.
- Used JavaScript to manage game state, handle player moves, and determine game outcomes.

LEADERSHIP

President & Founder - Free and Open Source Software Club at UTEP ⬀ <div align="right">December 2023 - Present</div>
- 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 <div align="right">August 2022 - January 2024</div>
- Held the Sun City Hackathon; a three-day competition attended by **more than 20 students** to develop AI-powered apps.