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Education

<i>The University of Texas at El Paso:</i>	El Paso, TX
Bachelor of Science in Computer Science	Graduated: May 2024
Master of Science in Computer Science	Expected: May 2026

Experience

Research Assistant

The University of Texas at El Paso — El Paso, TX (Part-time)
May 2022 – Present

- Alternated supervision under multiple professors, developing adaptability and strong interdisciplinary collaboration skills.
- Directed, delegated, and reviewed tasks for students, improving team project efficiency by 20%.
- Developed expertise in self-guided research methods, contributing to multiple projects in signal processing and networking.

Student Coordinator

College Pathways, AI4ALL — Remote, US (Part-time)
January 2024 – Present

- Successfully coached 30-45 students per semester, leading to a 30% improvement in project completion rates.
- Organized and led student mentoring sessions, coordinating biweekly meetings with volunteering experts in AI to enhance learning outcomes.
- Contributed -and actively participated-for the organization of Student Symposiums, providing students an opportunity to present projects to AI industry leaders.

Robotics Instructor

New Bots Robotics Academy — Guanajuato, Mexico
January 2020 – Dec 2020

- Developed and taught robotics curriculum for students aged 3-17, increasing engagement and retention in STEM topics by 25%.
 - Mentored and coached student teams for nationwide (Mexico) robotics competitions, achieving top placements and fostering teamwork skills.
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Active Research Projects:

Software-Defined Phase-Locked Loop (PLL) Implementation:

- Developing a software-defined PLL using Digium Asterisk Hardware Device Interface (DAHDI) to achieve GPS-independent synchronization in low-resource environments.
- Modified DAHDI's core to integrate the osmo-e1d protocol, ensuring precise timing synchronization and enhancing signal stability for remote telecommunications systems.

Osmocom-Rhizomatica 2G GSM Open Source Infrastructure:

- Conducting research on 2G GSM networks with the goal of improving mobile connectivity for underdeveloped communities.
 - Collaborating with Telecomunicaciones Indígenas Comunitarias (TIC-AC) and Rhizomatica to enhance signal-processing algorithms, optimize routing infrastructure, and explore scalability for potential 4G/5G applications.
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Previous projects:

Music generation tool:

- This tool is able to learn from a feed –collection of songs- and generate its own song from what it has been learning.
- Reviewed third parties code without documentation, enhanced it for the best-fit purposes of the research.
- Completed Google deep learning course.

Student academic performance ML model predictor:

- Obtained a dataset about how students with different backgrounds perform academically
- Trained a Random Forest model to find patterns correlations between background info and grades
- Optimized the model to minimize errors
- Used model to predict the grades of five made-up students

GPTChatBot:

- Contributed creating and deploying a Telegram bot, utilizing the integration of the OpenAI API with the Telegram Bot API, facilitating human-like interactions akin to ChatGPT.
 - Incorporated robust error management within the Telegram bot to ensure precise responses to non-textual user inputs like images, contacts, message replies, or any non-text elements.
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Skills:

- **Programming Languages:** Python, PHP, Haskell, Dart, C, Java, C#
 - **Development Tools:** IntelliJ, PyCharm, CLion, Visual Studio, Git, Linux-based systems
 - **Technical Skills:** Signal processing, Cyber-security, networking protocols, machine learning, advanced data structures, time complexity management
 - **Languages:** Spanish (Native), English (Fluent), French (Basic), German (Basic)
- **Certifications:** Apply AI (May 2023), Discovering AI (Nov 2022) – AI4ALL
 - **Awards:** WER (World Educational Robotics) 2017 European Open – Award of Excellence & First Prize, Guanajuato State Achievement Recognition
 - **Professional Memberships:** Coding Interview Club, Miners in Cyber Security, Women in Cyber Security (WiCS), Bandit Game Studio
 - **Leadership:** Founding President, Web-App Development Club at UTEP (WDC for short)