# **JOSE PAGUE**

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#### **EDUCATION**

The University of Texas at San Antonio Master of Science in Computer Engineering Expected Graduation: 08/2026 GPA: 3.33

The University of Texas at San Antonio

12/14/2022

Bachelor of Science in Computer Science; Concentration: Software Engineering

GPA: 3.13

- Marine Corps Scholarship Foundation Recipient (2016-2020)
- Hispanic Scholarship Foundation Scholar (2016, 2021), Honor Roll (2019)

# **SKILLS**

- RELEVANT COURSEWORK: Data Structures, Analysis of Alg., Network Security, Application Programming, Software Engineering, Data Science, Cloud Computing, Enterprise Software Engineering, Secure Software Development & Analysis, Principles of Cyber Security, Operating Systems, Systems Programming, Intro to Digital Forensics, Artificial Intelligence Engineering Programming, Computer Architecture, Calculus II
- TOOLS, LIBRARIES, AND FRAMEWORKS: GitHub, GitLab, Vi/Vim, MySQL, AWS, PyCharm, Jupyterlab, Bootstrap, JDK, SDK, JRE, Linux, .NET, WPF, Visual Studio, Docker, Kubernetes, PySpark, Maven, RPi 4, Cloudflare, Leaflet, Figma, Agile methodology, Hadoop, RESTful API, CI/CD, Object Oriented Design, PowerShell, Scrum Methodology, jQuery, Wireshark, OWASP, Nessus, Postman, Jenkins, Metasploit, Splunk, PyTorch, MATLAB, ReactJS, TensorFlow, TensorFlow Lite, Oscilloscope, Logic Analyzer, Fusion 360, KiCad, Vivado 2024.01, MSFT Azure, AWS
   Currently improving embedded/hardware skills through Udemy coursework
- **COMPUTER LANGUAGES:** C, Java, Python, HTML5, CSS, Vanilla JavaScript, PHP 8.1.2, SQL, Git, Markdown, sed, awk, bash, C#, XAML, JSON, YAML, Assembly Language
- LANGUAGES: Bilingual: English (Native: read, write, speak), Spanish (Native: read, write, speak)

# **EMPLOYMENT**

# AI/ML Engineer Intern | ForwardEdge-AI

06/2024 - Present

- **R&D Focus:** Exposed to multiple projects including beam formation, embedded engineering, frontend/backend development, The Yocto Project, and Blockchain and AI projects
- Project Contribution:
  - o Developed a frontend management portal, debugging, merging, and updating code
  - o Created MATLAB project simulation for Phase 1, integrating NVIDIA Sionna for beamforming. Advanced to Phase 2
  - o Implemented GNU Radio with SDR and Antennas for demonstration
  - o Used Hugging Face & Kaggle for initial MNIST blockchain project
  - o Gained hands-on experience with AVD and MSFT Azure for project deployment
- Events Focus:
  - o NAVAIR Event: Traveled and demonstrated beamformation, solidifying company stakes with VP
  - o **Thunderstorm Event:** Showcased beamforming work
  - o **Trident Spectre Event:** Presented beamforming project with future features
- Mentorship & Hands-on-Learning:
  - o Built and flashed a Yocto image for the Freeway board (NXP, Ubuntu 20.04, scarthgap branch) targeting AI Hardware acceleration & cryptography
  - o Gained exposure on Oscilloscope, logic analyzer, ESP32, Arduino, THT soldering
- Achievements:
  - Received recognition as an employee of the quarter (Fall 2024) with stock compensation

# Graduate Research Assistant | UTSA Department of Electrical & Computer Engineering

01/2024 - 09/2024

- **R&D Focus:** 5G/6G Core Network & Security, Network Slicing, AI/ML, Cryptography (with DOD & partnered Company)
- **Project Contribution:** Co/primary developer in position interception/detection graph simulations. Developed MATLAB classes for user input of radius and select plotted figures. Delivered weekly PowerPoint presentations
  - o created automated graph saving in '.fig', '.png', and '.txt' formats, organizing files into directories, reducing manual conversion time by approximately 82% per run
- Unofficially continue assisting as graduate research assistant

# **PROJECTS**

# **Project; Sponsored by DOD**

09/01/2022 - 12/14/2022

- Led a team of 4 in developing a full-stack website; created a full interactive map of U.S. power grids with color-coded markers, a reset button, and pop-up data functionality. Displayed real-time simulations of energy production, transfer, demand, and depletion due to normal and potential catastrophes. Changes in one marker dynamically affected the color and data output of connected markers
- **Responsibilities**: Primary developer. Led the design and development in full front-end/back-end website, debugging, and AWS EC2 server/database setup, while aligning with sponsors' requirements, needs, and guidance
- Tools, APIS's, Languages, and Frameworks: AWS EC2, OpenStreetMap, Leaflet, Ajax, PHP 8.1.2, Vanilla JS, HTML5, CSS, Bootstrap 5, Ubuntu 22.04.1 LTS, Postman, NGINX, SQL, MYSQL, phpMyAdmin, and Dreamweaver
- Achievement: A+ grade, gained positive feedback from mentors. Code has been transferred to DOD for further usage

# **Enterprise Software Engineering**

08/21/2022 - 12/14/2022

- Configured AWS EC2 Server, designed SSL, and developed PHP files for secure data organization and retrieval from a 'Blackbox' containing unique sessions, multiple files, and occasional data corruption
- **Responsibilities:** Debugging, data salting, error/access logs, optimal database creation/organization, cronjob for data retrieval, and reporting and analyzing retrieved data
- Tools, Libraries, and Frameworks: cronjob, AWS EC2, Ubuntu 22.04.1 LTS, NGINX, Dreamweaver, PHP 8.1.2, SQL, MYSQL, Postman and phpMyAdmin

# **Hotel-Managment App**

09/01/2021 - 11/30/2021

- Led a team of 4 in designing and developing a dynamic hotel reservation system for a flexible chain of 10+ hotels. Managed employee and customer needs with features for adjusting hotel/room sizes and making reservations weeks to months in advance with variable price changes
- **Responsibilities:** Led the design and development of a login and reservation system with unique privileges for employees and customers, including features for searching, creating, updating, and deleting reservations with weekly price changes

#### CERTIFICATIONS

Atlassian Jira Fundamentals Badge | Atlassian Confluence Fundamentals Badge
AWS Certified Cloud Practitioner
AWS Certified Solutions Architect - Associate

05/2023 - 05/2026
10/2023 - 10/2026

# SCHOOL ACTIVITES & WORKSHOPS

- Organizations:
  - o IEEE, RAS (Robotics Automation Society), PES (Power & Energy Society), PES (Power Electronics Society), ACM (Association of Computing Machinery)
- Workshops & Events Attended:
  - o CPS Energy Tour (February 26th, 2025)
    - Learned about SCADA systems & power production
  - o Hardware & PCB Workshops: KiCad, Soldering, Raspberry Pi Pico Streamdeck, ESP32
  - o RAS UTSA Robotics Team