PAOLA AVILA

College Station, TX 77840 • 469 664 2901 • pavila@tamu • www.linkedin.com/in/paola-avila-790543302

https://github.com/Pavila20

SUMMARY

Highly motivated Senior Computer Engineering student at Texas A&M with a strong foundation in hardware and software integration. Proven ability in Embedded Systems Design and C++ Programming. Eager to leverage project management and analytical skills gained through academic and volunteer projects to contribute to a results-driven engineering team.

SKILLS

Programming Languages : C++, Python, Ruby, JavaScript , MATLAB

Engineering & Hardware : Verilog , PCB DesignDigital Logic ,Circuit Analysis

Tools & Platforms: Visual Studio Code, Eclipse IDEGit/GitHub , Linux/UnixMicrocontrollers (Arduino/Raspberry Pi)

Language : Spanish

PROJECTS & ACADEMIC EXPERIENCE

Data Structures and Algorithms :

- Engineered a high-performance C++ application involving complex Data Structures (e.g., hash tables, AVL trees) to model and optimize pathfinding on integrated plot data.
- Developed and Integrated multiple distinct algorithms to analyze various plot configurations, resulting in a 15% improvement in execution time over baseline methods.
- Utilized advanced C++ features and Object-Oriented Programming (OOP) principles to build a robust, modular, and scalable codebase.

Digital Logic Design and Verilog Implementation :

- Designed and Simulated multiple digital logic circuits using Verilog (HDL) to implement specific functionalities for a core Computer Engineering project.
- Authored comprehensive Verilog test benches to verify the functionality of all module components, successfully passing 100% of functional tests and validating timing constraints.
- Demonstrated core competence in the translation of boolean algebra and state diagrams into working hardware description language

Hardware Hacking/Security Club Involvement :

- Contributed to weekly group discussions and general meetings focusing on advanced topics in Hardware Security, Reverse Engineering, and Vulnerability Analysis.
- Researched and presented on topics like side-channel attacks and embedded system security, demonstrating proactive engagement with the field beyond required coursework.

EDUCATION

Bachelor of Science in Computer Engineering — Expected Graduation: May 2026

Minor in Mathematics

Texas A&M University, College Station, TX