Nestor Toscano

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Education

Texas A&M University Aug 2023 – May 2027

Bachelor of Science in Computer Engineering *College Station, TX*

- **Current GPA:** 4.0/4.0
- **Courses:** Intro to Computer Systems, Signals and Systems, Computer Arch and Design, Program Design & Concepts, Computing in Python, Data Structures & Algorithms, Discrete Structures Computing, Intro to Digital System Design, Electrical Circuit Theory

Work Experience

Student Technician Aug 2025 – Present

Intro to Digital Systems Design | Texas A&M University *College Station, Tx*

- Selected to support instruction for foundational digital logic and circuits courses, leading lab sessions, answering technical questions, and mentoring students in Verilog, simulation tools, and circuit design.
- Facilitated hands-on learning and supported students in mastering digital logic and circuit design concepts.

Projects

Self-Hosted Web & DNS Server - GitHub | Website Jul 2025

Personal Project | Ubuntu Virtual Private Server *Palestine, Tx*

- Hosted and administered an authoritative DNS server with BIND9 and a website on Apache2, managing full-stack deployment and successfully migrating the environment to a Raspberry Pi 4.
- Strengthened website security by configuring file permissions, setting up secure databases, and implementing key security best practices to mitigate common web exploits.
- Designed and launched a user-friendly website with HTML, CSS, and Javascript, conducting several usability tests to refine the interface and improve navigation flows.

LC-3 Virtual Machine in C - GitHub Aug 2025 - Sep 2025

Personal Project | Systems Programming *College Station, Tx*

- Built a complete LC-3 virtual machine in C, executing all 15 opcodes and handling condition codes, memory, and I/O, demonstrating proficiency in systems programming and computer architecture.
- Improved understanding of low-level computing by decoding instructions, managing registers/PC-relative addressing, and simulating memory-mapped I/O, which deepened knowledge of ISA design and execution flow.

Spotify Album Display with Raspberry Pi - GitHub May 2025 – Jun 2025

Personal Project | Raspberry Pi Zero, RGB LED Matrix *College Station, Tx*

- Implemented a Raspberry Pi Zero–based display system to render currently playing Spotify tracks on a 64x64 RGB LED matrix.
- Implemented API integration with Spotify Web API, leveraging OAuth to fetch live track information for display on a 64x64 RGB LED matrix.
- Gained hands-on experience using the command line to install packages, configure software, and edit files.

Electronic Security System Design Feb 2025 – Mar 2025

Electrical Circuit Theory | Texas A&M University *College Station, Tx*

- Designed and built an electronic security system using an IR emitter, photo detector, op-amps, comparator, latch, and LEDs.
- Improved circuit design skills by integrating analog components into a functional detection system, demonstrating understanding of signal processing and hardware logic.
- Validated system performance by testing detection accuracy and response under various lighting and distance conditions, ensuring robust and consistent operation.

Technical Skills

Operating Systems: Linux (Ubuntu), Windows
Languages: C/C++, Python, Bash, Verilog HDL, LaTeX, JavaScript, HTML/CSS, Assembly
Developer Tools: VS Code, Git, Vivado, Bambu Lab Studios, LTSPice
Libraries: SymPy, NumPy, Matplotlib, jQuery
APIs: Spotify Web API