Emiliano Fernández Cervantes

Mail: fdezemi@outlook.com Personal Website: emilian.website Tel.: +1 310-256-5088
GitHub: github.com/EmilianFC20 LinkedIn: linkedin.com/in/emiliano-fernandez-cervantes/

PROFESSIONAL PROFILE

- Computer Engineering M.S. student passionate about designing and building scalable network infrastructure. Seeking to apply knowledge of computer architecture, hardware design, and automation to solve challenges in large-scale datacenter environments.

EDUCATION

- **M.S. in Computer Engineering**
  University of Southern California
  August 2025 - May 2027
- **B.S. in Biomedical Engineering**
  Tecnológico de Monterrey at Mexico City
  August 2016 - December 2020
- **Biomedical Engineering Exchange Program**
  University of North Texas
  August - December 2019

ENGINEERING PROJECTS

- **ARM-Compatible Smart NIC with GPU**
  Developing an ARM-based SmartNIC with GPU acceleration for high-throughput, low-latency network processing (Github).
  January 2026 - Present
- **Pipelined MAC Unit**
  Designed and implemented a high-performance 16-bit pipelined MAC unit, from architecture to full-custom layout, using Cadence Virtuoso.
  December 2025
- **Home Server and Mesh Network**
  Deployed a Debian-based home server for NAS, home automation, reverse proxy, and DNS filtering using Docker. Implemented a mesh network, enhancing home connectivity and network management.
  December 2023-August 2024
- **Local AI Server**
  Created a local AI inference server leveraging an NVIDIA GPU with Ollama models and OpenWebui to accelerate AI workloads. Integrating a Discord bot for secure, private document querying.
  September 2024 - Present

SKILLS

- **Programming Languages**
  Python, C/C++, Verilog, CUDA, Bash, Dart, VBA.
- **Software Tools**
  Linux (Debian), Docker, Git, PyTorch, Jupyter, Modelsim, Cadence Virtuoso, MATLAB, Atmel Studio, Arduino, Solidworks, LaTeX, Flutter.
- **Networking**
  TCP/IP, DNS, DHCP, LAN/WAN, Mesh Networking.
- **Languages**
  Spanish (native language), English (C1 level).

WORK EXPERIENCE

- **Sr. Project Support Coordinator** - PPD, Thermo Fisher Scientific *May 2021 - Aug 2025*

- Co-developed and deployed a VBA-based tool to automate access reconciliation across multiple systems, creating company-wide time savings and reducing compliance risks for hundreds of projects.
- Led support teams, managed timelines, developed technical training materials, and coordinated with management to ensure process adherence and quality across a large portfolio of client projects.

ACADEMIC PUBLICATIONS

- **Fall Risk Assessment Research Article**
  Fernandez, E. et al. (2023). Recurrence quantification analysis of center of pressure trajectories for balance and fall-risk assessment in young and older adults. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 31, 926–935. https://doi.org/10.1109/tnsre.2023.3236454

AWARDS & RECOGNITIONS

- Viterbi Endowment Scholarship for full master's degree tuition (2025-2027)
- Fulbright Grant for master's studies in USA (2024)
- Graduated with Honors and Top of the Biomedical Engineering Class (2020)
- Academic Distinction Scholarship for 70% of bachelors degree tuition (2016-2020)