Angel Fernando Borquez Guerrero

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Hermosillo, Sonora.

Education

Universidad de Sonora GPA: 90%
Bachelor of Science in Computer Science **August 2023 – Present**

Professional Experience

ACARUS — Supercomputing Area Supervisor: Dra. María del Carmen Heras Sánchez
Professional Intern **September 2025 – Present**

- Part of a development team building a specialized forum for users of *Yuca*, the university HPC system.
- Implemented core features including posts, direct messaging, and service request workflows to support the HPC user community.

Research Experience

University of Guadalajara Supervisor: Dr. Rafael Morales Gamboa
Research Intern **June – July 2025**

- Extended and evaluated an Entropic Associative Memory (EAM) model through large-scale experiments combining neural representations and probabilistic memory.
- Refactored the data pipeline and experimental framework to support scalable datasets, dynamic class selection, and controlled novelty detection experiments.
- Retrained perceptual neural networks and designed evaluation protocols to analyze memory recall, rejection behavior, and robustness.

Competitions & Projects

NASA Space Apps Challenge (2024) Project: Voyager CXXV
Project Co-Lead **October 2024**

- Co-led the development of a geospatial simulation tool to evaluate the impact of urban green areas on temperature and air quality.
- Designed interactive spatial visualizations and coordinated technical integration within the team.

TE AI CUP (2025) Project: AI Generated Machine Downtime Insights
UI Developer **January – May 2025**

- Developed the user interface for an AI-based industrial downtime analysis tool, focusing on clear visualization of patterns, anomalies, and clustering results derived from machine time-series data.

NASA Space Apps Challenge (2025) Project: Endurance CXXV
Project Co-Lead **October 2025**

- Co-led the development of an educational weather application focused on climate awareness for children.
- Developed frontend, backend, and UI components with emphasis on accessibility and usability.

1st Place Winner – MICAI 2025 MeDA Challenge **October 2025**

- Contributed to a 1st Place victory in a national competition on Medical Domain Adaptation using Self-Supervised Learning (SSL), leading to an invitation to publish in a journal special issue.
- Supported the project through dataset structuring, scientific writing, and development of presentation and visual assets.

Technical Skills

Programming: Python, C++, Java, SQL, JavaScript, TypeScript
Web: HTML, CSS, SASS, Vue.js, Django, NPM
Systems: Linux (Arch), HPC, Virtual Machines, Proxmox VE, VirtualBox
Tools: Git, GitHub, Jupyter, Google Colab, LaTeX, GIS