

EMILIANO GUTIERREZ

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Education

Stevens Institute of Technology

May 2028

B.S. Computer Science — GPA: 3.00 — 2nd Year (2/4)

Hoboken, NJ

- Awards: Presidential Scholarship, Edwin A. Stevens Scholarship, Stevens Grant.
- Relevant Coursework: Discrete Structures, Computer Architecture, Algorithms, Systems Programming, Principles of Programming Languages, Intermediate Statistics, Software Development Process, Computers and Society, Frontiers of Technology: Biotechnology, Physics Lab I.

Technical Skills

Languages: Python, Java, C++, C, SQL, Assembly, JavaScript/TypeScript.

Tools & Infrastructure: GitHub Actions (CI/CD), Docker, Node.js, Next.js, MongoDB, Jira, Pandas, NumPy.

Strengths: Systems Design, API Development, Data Structures & Algorithms, Computer Architecture.

Projects

F1 Podium Predictor & Championship Simulator

React, JavaScript, REST APIs, Recharts

- Engineered Monte Carlo simulation algorithm executing 10,000 iterations to forecast Formula 1 race outcomes with dynamic weighted scoring that shifts from 70% historical to 100% current-season data based on race progression.
- Integrated Ergast F1 REST API with asynchronous data fetching, error handling, and data normalization to enable autonomous synchronization of live race results across 24-race season calendar.
- Implemented circuit-specific performance modeling incorporating track type classifications (Power, Street, Technical), driver skill ratings (71-98 scale), and team chemistry factors to enhance prediction accuracy.
- Developed interactive dashboard with 4 visualization panels using Recharts library, CSV import functionality for manual data integration, and report export feature generating detailed prediction analytics.

Silverback CPU – Custom Single-Cycle Processor

Logisim-Evolution, Python, Assembly

- Designed and implemented a custom single-cycle CPU datapath including register file, ALU, instruction memory, and program counter.
- Created a bespoke 8-bit **Instruction Set Architecture (ISA)** with fixed-length encodings for arithmetic and load/store operations.
- Built a Python-based assembler translating assembly programs into executable machine code for hardware simulation.

Waddle – Full-Stack Job Portal MVP

Next.js, Node.js, MongoDB, Jira

- Developing a multi-tenant platform for 3,000+ users to facilitate internship matching for local businesses.
- Designing scalable backend architecture and authentication logic, focusing on data integrity and secure CRUD workflows.

Experience

Stevens Software Engineering Club

Aug 2025 – Present

Technical Project Manager

Hoboken, NJ

- Leading a 6-person engineering team to develop a full-stack job portal; managing technical roadmap and feature prioritization.
- Implemented **GitHub Actions CI** workflows to automate testing and deployment, reducing code integration conflicts by 30%.
- Defining technical specifications and **API acceptance criteria** to ensure backend-to-frontend compatibility.
- Facilitated code reviews and retrospectives in **Jira** to maintain code quality and ensure high-reliability deliverables.

The Wash Tub

Mar–Aug 2024; May–Aug 2025

Operations Data Analyst

San Antonio, TX

- Automated reporting workflows using Python-based data processing, reducing manual operational discrepancies by 20%.
- Analyzed throughput metrics to identify system bottlenecks, implementing workflow redesigns that increased efficiency by 15%.

Leadership

Delta Tau Delta Rho Chapter

Jan 2025 – Present

New Member Educator

Hoboken, NJ

- Lead education program for new members, designing weekly learning modules and coordinating chapter-wide onboarding.
- Facilitated training sessions on leadership and risk management, managing communication between the executive board and new members.

Additional

Languages: English, Spanish.

Interests: Fintech Infrastructure, Applied AI, Software Engineering, Soccer, Photography.