Yahil Corcino Valdez

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EDUCATION

New Jersey Institute of Technology   Newark, NJ
B.S. Computer Engineering, Minor in Applied Mathematics   *Sep 2024 – Exp. May 2027*
   − Relevant Coursework: Data Structures & Algorithms (C++), Digital Logic, Microprocessors, Circuits & Systems I/II, Differential Equations, Multivariable Calculus, Probability & Statistics, Physics I & II

EXPERIENCE

Software Engineering Intern   Dec 2025 – Present
Society of Hispanic Professional Engineers
   − Served as principal engineer for a production iOS app, contributing **120+ hours** and leading core system development during a 3-week sprint, deploying to 200+ users.
   − Designed and implemented backend architecture using Supabase, including secure authentication, user profiles, posts and comments, event management, admin controls, and a points-based ranking system.

C++ Tutor   Sep 2025 – Present
New Jersey Institute of Technology
   − Provide one-on-one instruction in C++ focusing on data structures, memory, pointers, and algorithms.
   − Develop targeted exercises & quizzes emphasizing time/space complexity and correctness under constraints.

Computer Science Teaching Assistant   Jun 2025 – Aug 2025
Educational Opportunity Program (EOP) – NJIT
   − Led twice-weekly recitations for a cohort of 36 students, teaching programming fundamentals and algorithmic problem solving through live coding.
   − Provided **16+ hours/week** of one-on-one tutoring, reinforcing programming fundamentals and debugging skills.

Data Analyst   Jul 2023 – Aug 2024
Plot Pointe
   − Analyzed performance metrics across large-scale datasets to identify patterns and optimize content strategy.
   − Applied statistical analysis to engagement data, driving **300M+** Instagram views in 6 months.
   − Operated in a fast-paced startup environment, independently identifying problems and shipping data-driven solutions with minimal guidance.

PROJECTS

AI-Powered Data Center Optimization | *Python, Optimization, Machine Learning* | *1st Place – Claude Hackathon*
   − Modeled data center thermals as a constrained optimization problem, balancing capacity, cost, and failure risk.
   − Developed predictive system with 94% accuracy in hotspot detection, reducing critical overheating events by 75%.
   − Designed workload redistribution logic to proactively mitigate failures rather than reactively respond.

Smart Trashcan Monitoring System | *C++, Embedded Systems, Flask* | *ECE Dept. Showcase Nominee*
   − Built an autonomous, event-driven IoT system using ultrasonic sensors to detect fill levels and transmit telemetry.
   − Integrated ESP32-S2 Mini with AWS-hosted Flask backend for monitoring across a campus-wide network.
   − Improved power consumption by 550% from V1, extending projected battery life to 1.7 years.

LEADERSHIP & SERVICE

Director of Outreach   Mar 2025 – Present
IEEE – NJIT Student Branch
   − Lead outreach for technical workshops and industry events, increasing student engagement in ECE programs.
   − Grew chapter membership by 120+ students while increasing average event attendance by 34%.

TECHNICAL SKILLS

Languages: C++, Python, JavaScript
Systems & Tools: Linux, Git/GitHub, AWS, SQL, MongoDB, Flask, Microcontrollers, KiCad
Concepts: Data Structures & Algorithms, Graph Algorithms, Optimization Problems
Libraries & Frameworks: NumPy, Pandas, TensorFlow, React Native, Expo