Rene Alzina

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EDUCATION

University of Notre Dame | Notre Dame, IN — May 2027
Bachelor of Science in Engineering — *GPA: 4.0*
Major: Computer Science | Minor: Engineering Corporate Practice (Business Management & Engineering Leadership)

TECHNICAL AND LANGUAGE SKILLS

Technical: Python, C/C++, Java, Kotlin, JavaScript, HTML, CSS, bash, React, Vercel, Pandas, Tableau, Git/Github, Vue.js
Coursework: Data Structures, Systems Programming, Programming Paradigms, Theory of Computing, Introduction to AI
Spoken Languages: Fluent in Spanish, Intermediate French

EXPERIENCE

84.51° |Data Club of Notre Dame — January 2025 – April 2025
Team Leader

- Led a team of **8** to develop **4 Tableau dashboards**, analyzing Kroger's sales, promotions, and customer segments.
- Processed and analyzed over **20 million** lines of raw data using **Pandas** for data cleaning and preparation.
- Delivered a polished final project presentation to **20 stakeholders** in the Chicago office by delegating tasks and leading **3** weekly meetings with both the team and the company contacts to ensure alignment and smooth execution.

Chawla Lab |Lucy Family Institute for Data and Society, Notre Dame, IN — January 2025 – April 2025
Research Intern

- Collaborated with a team of 6 on a **Twilio** app to communicate with Mexican parents of child cancer patients.
- **Tested** and **configured** Twilio's speech models to ensure accurate pronunciation and interpretation of Spanish.

Fabricaciones y Montajes Metálicos S.A. de C.V. | Mexicali, Baja California, Mexico — July 2024 – August 2024
Assistant Manager Intern

- Developed an application in **C** that stored machine data (production capabilities, production speeds, and shift availability) to **calculate production forecasts** based on the required parts and quantities for each project.

PROJECTS

Web Development |Notre Dame, IN — April 2025 – Present

- Implemented StockPredict, a fullstack forecasting app using **React**, **Tailwind CSS**, and a **Python** backend; deployed on **Vercel** and **Render**, it implements **Monte Carlo simulations**, **decision tree classification**, and **time series forecasting** to predict stock behavior, visualized in frontend charts along with an **AI-generated** analysis from **Groq**.
- Constructed Top News, a dynamic **React** app to display and read aloud top news by fetching external API data, enhancing accessibility and user experience; deployed on **Vercel** with a **serverless backend** for secure API handling.
- Built a **study helper app** using **HTML, CSS, and JS**, implementing flashcards, timers, and file-saving functionality.

Systems Programming | Notre Dame, IN — January 2025 – May 2025

- Engineered a low-level multi-client chat server in **Python** using **TCP sockets** and **select** for real-time messaging.
- Recreated core **UNIX** functionality in **C** and **Python**, implementing process management, file I/O, and concurrency.

LEADERSHIP

McInerney Fellows Program|Notre Dame, IN
Peer Mentor — August 2024 – Present

- Mentored a first-year Computer Science student with a similar background by one-on-one meetings to **guide** her on coursework, resume-building projects, and campus involvement; recognized as **top mentor** by program leadership.

Society of Latino Engineers and Scientists | Notre Dame, IN
Professional Development Chair — August 2024 – Present

- Organize **5** events for **100**+ students each semester, hosting industry speakers and providing career readiness support.

Data Club of Notre Dame| Notre Dame, IN — August 2023 – Present
Co-President (August 2025- Present)

- Rebranded and restructured the club by strengthening project accountability, building a motivated team culture, and driving promotion efforts, resulting in growth from **4** to **7** projects and **30** to **120** members in one semester.