

Fernando Lopez

872-305-7616 | fernandolpz.dev | flope8@uic.edu | [linkedin.com/in/fernando-lopez-dev](https://www.linkedin.com/in/fernando-lopez-dev) | github.com/FernandoLpz0911

Education

University of Illinois Chicago (UIC)

Aug 2023 - Dec 2026

Bachelor of Science in Computer Science

Relevant Coursework Data Structures, Programming Practicum, Mathematical Foundations of Computing, Machine Organization, Languages and Automata, Programming Language Design and Implementation

Technical Skills

Programming Languages: Python, C++, JavaScript, Golang, Java, C, C#, SQL, Intel x86 Assembly, RISC-V

Frameworks & Tools: React, Vercel, Django, Flutter, Dart, ROS, Git, Linux, Vim, VS Code, Firebase, Sanity API, Brevo, EmailJS, Maven, Pytest, Junit5, SQLite, Figma

Projects

Notes App Mobile Project (*Passion Project*) (C++, Dart)

Jun 2025 - Present

- Architected cross-platform Minimum Viable Product (MVP) notes application (Flutter/Dart)
- Programmed C++ conversion logic for seamless integration with Firebase, managing data flow for up to 20,000 edits daily
- Secured user authentication and data persistence via Firebase, supporting seamless synchronization for 20,000 daily edits
- Developed a scalable Object-Oriented architecture for the application, designed to manage an initial data volume of 1 gigabyte of notes

Dulce Tentaciones Bakery Website (*Passion Project*) (JavaScript, HTML, CSS)

Jun 2025 - Aug 2025

- Constructed a responsive React frontend, delivering 5 core pages for a startup bakery
- Integrated Brevo and EmailJS for email marketing, newsletters, and seamless form submissions supporting 1000 submissions per month
- Integrated Sanity API to manage dynamic, client-side content for streamlined updates

UIC Registration Page (*Passion Project*) (24-Hour-Hackathon) (JavaScript, HTML, CSS)

Mar 2025 - Mar 2025

- Created a responsive, user-friendly registration page
- Enhanced UI/UX design by implementing accessibility features and an intuitive layout
- Collaborated with a team of three to design and develop a responsive registration page in a 24-hour hackathon, competing against 15 teams

Digital Art Watermark Page (*Coursework Project*)

- Engineered a secure, full-stack permission system (React/Django) utilizing advanced structures for verified image scraping
- Implemented Merkle Tree, Trie, and Bloom Filter to provide verifiable, tamper-proof proof of permission and accelerate image hash lookups by reducing average search time to $O(\log n)$ runtime
- Designed the schema and API to efficiently store metadata (permission, author details) with SQLite

Relevant Experience

Engineering Design Team, Control Systems Team Member

NASA Lunabotics 2026 Challenge, UIC Team (ROS, LiDaR)

Sep 2025 - Present

- Designed a lunar robot prototype to support off-world resource utilization for the Artemis Mission
- Defined mission statements and established 15+ key system requirements by applying NASA systems engineering principles
- Researched and evaluated robot designs, focusing on dust tolerance, energy efficiency, and autonomous capabilities
- Engineered software architecture and control logic, designing a robust data transmission system restricted to 4 kbps using H.265 encoding
- Investigated and simulated LiDaR technology using ROS (Robot Operating System), developing a pathfinding algorithm for autonomous visual mapping of lunar terrain

Leadership & Activities

Women in Computer Science

Aspire To Inspire Mentor

Sep 2025 - Present

- Led and guided two students through the development of personal web portfolios, advising on design, architecture, and deployment best practices
- Coordinated a collaborative team of four (two mentors, two mentees) to architect a real-time chatting application using Django and React
- Defined the initial scope and strategy for implementing AWS deployment and future cross-platform expansion to mobile
- Communicated technical insights and networking strategies, fostering a supportive environment

Work Experience

Monterrey Security

Event Security

Jun 2025 - Present

- Resolved incidents and coordinated with security teams to maintain a secure environment for 63,500 patrons

Lawn Bowling Inc.

Bowling Attendant

Aug 2023 - Jan 2025

- Diagnosed and repaired complex technical issues with POS and Lane Machine systems, reducing customer downtime by 25%