

Gabriel Castillo

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Education

Cornell University, College of Arts and Sciences GPA: 3.83 / 4.0 *Expected May 2028*
BA in Computer Science, Minor in Artificial Intelligence
Relevant Coursework: OOP & Data Structures (Honors), Discrete Math, Functional Programming, Frontend App Dev, Linear Algebra, Calculus II, Intro to ML, Introduction to Analysis of Algorithms

Technical Skills

Languages: Swift, Java, Python, TypeScript, JavaScript, C++, C, OCaml
Frameworks / Libraries: Flask, SQLAlchemy, PyTorch, Firebase, UIKit, JavaFX, Expo, React Native
Natural Languages: English (native), Spanish (fluent), Chinese (conversational)

Experience

rapStudy — US DoE-funded Musical Ed-Startup *Remote*
Full-Stack Software Engineer Intern *Dec 2024 – August 2025*

- Refactored a 5,000+ line React codebase, improving page load times by 30%.
- Resolved major Firebase syncing issues, increasing data throughput by 40%.
- Delivered 3 new features that enhanced platform usability and demo success.

Blue Pond Group Ltd. — Hatch Blue Backed Startup *Chiang Mai, Thailand*
Full-Stack Software Engineer Intern *Aug 2022 – Jun 2024*

- Built and launched the company website and blog using HTML, CSS, and JS.
- Developed an iOS app for shrimp farmers using Swift and Firebase.
- Boosted profits by 15% through product placement analysis with Python.

Projects

Harbor 🗣 – Cornell Dating App *June 2025 – Present*

- Built personality-first dating app with progressive photo reveal and 1:1 matching.
- Engineered full stack in React Native, Expo, Node.js, and MongoDB.
- Integrated StreamChat and protected routes for @cornell.edu access.
- Collaborated with 2 co-founders to launch at Cornell Fall 2025.

Fyndz – Thriftstore Discovery and Review App *Apr 2025 – Present*

- Designed scalable backend architecture with Firebase reducing reads/writes by 30%.
- Led mobile development with React Native & Expo, adding cost-efficient push notifications.
- Coordinated work in a 4-person team using GitHub for version control and feature integration.

Odyssey – Interactive OCaml Theorem Prover *Mar 2025*

- Worked with 3 others to build propositional logic theorem prover with SAT solving and tautology check.
- Implemented recursive descent parser and AST interpreter in OCaml with 5 logical operators.
- Developed interactive CLI with ANSITerminal for colored output and step-by-step proof visualization.
- Added CNF conversion, DIMACS export, and LaTeX document generation for academic compatibility.

LockedIn 🗣 – iOS Swipe-Based Networking App *Dec 2024*

- Built LinkedIn-Tinder hybrid at Cornell AppDev's Hack Challenge (1st/28).
- Developed frontend with Swift and UIKit; integrated Firebase for auth and messaging.
- Created REST API with Flask, SQLAlchemy; used AWS S3 for image hosting.

Artificial Life Evolution Simulator *Aug 2024 – Dec 2024*

- Led a team of 4 to develop a creature evolution simulation with food, reproduction, and mutation.
- Implemented a parser and AST interpreter with fault injection capabilities.
- Built simulation engine and JavaFX GUI with real-time user interaction.
- Enabled large-scale simulations of billions of ticks to emulate evolutionary behavior.