Lucas Carlos Casas

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EDUCATION

Cornell University, College of Engineering – Ithaca, NY **Expected May 2026**
B.S. – **Computer Science**, Minors in Artificial Intelligence, Business
Relevant Coursework:
CS 2110: Data structures and algorithms (Java), **CS 2800:** Discrete structures, **CS 3110:** Data Structures & Functional Programming (OCaml), **CS 3410:** Computer Systems, **CS 4700**: Foundations of AI, **CS 4701:** Practicum in AI, **CS 4820:** Intro to Analysis of Algorithms, **BTRY 3080:** Probability Models and Inference, **CS 4780:** Machine Learning, **Other:** Calculus 1-3 & Linear Algebra

PROJECTS & WORK EXPERIENCE

Lockheed Martin, ***Software Engineering Intern & Fall 2024 Co-op*** **June – Dec. 2024**

- Shipped ~1800 lines of code for a large web app using Angular, .NET, and C# as a full stack developer.
- Hyper tuned LLM's and RAG as a service to interact with proprietary data and generate insights.
- Collaborated in a team on a large-sized project leveraging git workflows, AGILE methodology and SCRUM.
- Asked to continue my work throughout the Fall 2024 semester for a part time remote position.

Palantir Technologies, ***Palantir Launch*** **March 2024**

- Mentored by Palantir engineers to work and learn about the Palantir AIP (Artificial Intelligence Platform).
- Engaged in learning workshops to improve technical interview and collaborative software skills.
- Analyzed a pandemic simulation, leveraging Palantir Foundry, AIP, and Typescript to draw analytical insights.

Flare, ***Founder*** **March 2023 - Present**

- Architected and developed Flare, an innovative open-source Python search engine that aggregates energy and climate news from diverse sources, centralizing them into a NoSQL database for easy access.
- Implemented advanced search capabilities leveraging Elasticsearch and Lucene, enhancing user experience through keyword matching, date filters, and a truthfulness algorithm that cross-references articles with IPCC climate report.
- Engineered a search engine that can sort and index 500 articles with an average speed of 78 ms.
- Developed an interactive globe in React & ThreeJs using linear algebra & trigonometry to display article data.
- Deployed web application using cloud with AWS and CI/CD pipelines to build.

Ventures Accelerated, ***Software Fellow*** **Sep. 2023 - Present**

- Collaborated with startups, providing software consultancy & code tailored to their requirements.
- Integrated one team's AWS Lambda backend, improving API response speed by ~35% from their Flask counterpart.

Cornell Hitch, *Cornell AppDev Hackathon Runner-Up* ***Back-end Developer*** **Dec. 2022**

- Developed a Flask REST API application with Python to handle ridesharing to airports for Cornell students.
- Won the second-place award out of ~120 peers for best backend.
- Created a secure student authentication API with OAuth, SQLite3, and Alchemy.
- Worked in a team of three, using GitHub for DevOps, resulting in a cohesive frontend-backend pipeline.

McDiver **May 2023**

- Reduced Dijkstra's algorithm to solve a maze problem in Java, with an algorithm ranked 12th out of 620 students.

SKILLS

PROGRAMMING: Python, Java, Typescript, C#, OCaml, Rust, JavaScript, SQL, (Familiar) C++
LIBRARIES/FW: Reactjs, Nodejs, Angular, .NET, Docker, Elastic, SQLAlchemy, OAuth, Flask, REST APIs, Git, GCP, AWS
LANGUAGES: Spanish (native), English (native), Catalan (proficient)

LEADERSHIP

Sin Fronteras Club, ***President***

- Organized the running, financing, planning, and coordination of all campus events related to Hispanic culture.

Cornell Prepare, ***Prepare Mentor***

- Led and mentored a diverse group of international incoming students, facilitating transition to Cornell by organizing orientation activities, fostering a welcoming environment, and addressing cultural acclimation challenges.