Lucas Carlos Casas

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EDUCATION

Cornell University, College of Engineering – Ithaca, NY   **Aug 2022 – Dec 2025**
B.S. – Computer Science, Minors in Artificial Intelligence, Business

SKILLS

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

PROJECTS & WORK EXPERIENCE

Roblox, *Software Engineering Intern* – *San Francisco Bay Area, CA*   **May 2025 – Aug 2025**
- Implemented Data Store soft deletion support by extending Roblox's distributed background processing framework.
- **Shipped new backend gRPC APIs and access control logic** to **safely queue billions of items** to process deletions at scale, **safely deleting 10k+ records / sec per worker** across millions of games.
- Completed internship stretch goals including extensive metrics reporting, communicating with Creators, **completing security and legal reviews**, UI changes to the Creator Dashboard, and **leading a successful alpha launch**.

Amazon, *Software Development Engineering Intern* – *New York, NY*   **Jan 2025 – Apr 2025**
- **Led end-to-end design and launch of an event-driven service** that proactively validates **~200 million** daily abandoned-cart & browse-again email/push/SMS templates, helping safeguard **>$3 B** in annual marketing revenue.
- **Architected a scalable AWS-native pipeline** (Step Functions, Lambda, CloudWatch) running thousands of parallel validations in **< 12 seconds** - slashing mean time-to-detect issues with auto-remediation alarms.
- Built a custom SigV4-signed HTTP client with advanced cookie/header logic to access secure internal endpoints.
- Delivered **~23,000 lines of production Java/TypeScript** code boasting test coverage over **94%**.

Lockheed Martin, *Software Engineering Intern & Fall 2024 Co-op* – *Remote*   **Jun – Dec 2024**
- Developed for a large pre-existing web app using **Angular, .NET, and C#** as a full stack developer.
- Hyper tuned **LLM's** and integrated **RAG as a service** to interact with proprietary data and generate insights.
- Earned an extended part-time remote position for Fall 2024 based on exceptional performance within team.

Flare, *Founder*   **Mar 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 search 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**.
- Engineered an interactive globe using **React & ThreeJs**, leveraging linear algebra & trigonometry to visualize data.
- Deployed web application using cloud with **AWS and CI/CD pipelines** with development staging.

Palantir Technologies, *Palantir Launch*   **Mar 2024**
- Mentored by Palantir engineers to work and learn about the Palantir AIP (Artificial Intelligence Platform).
- Analyzed a pandemic simulation, leveraging **Palantir Foundry, AIP, and Typescript** to draw analytical insights.

Cornell Ventures Accelerated, *Software Fellow*   **Sep 2023 – Present**
- Collaborated with startups, providing software consultancy & code tailored to their requirements.
- Integrated a 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.

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.