# Marc Bernardino

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## Education

**Stanford University** **June 2026 (Expected)**
*Bachelor of Science in Computer Science* *Stanford, CA*

- **GPA**: 3.7/4.0
- **Relevant Coursework**: Intro to Computer Science, Data Structures and Algorithms, Standard C++ Programming, Probability for Computer Scientists, Scientific Python, Social & Economic Impacts of Artificial Intelligence
- **Expected Coursework**: Multivariable Calculus and Linear Algebra, Mathematical Foundations of Computing, Introduction to Product Management, Computer Organization and Systems Design

## Technical Skills

**Languages**: JavaScript, TypeScript, HTML/CSS, Java, C++, Python
**Technologies**: Node.js, React, React Native, Next.js, Express, TailwindCSS, Flask, TensorFlow, PyTorch, OpenCV
**Developer Tools**: Jira, Git, VS Code, Amazon Web Services, Google Cloud Platform, DigitalOcean
**Databases**: MongoDB, DynamoDB, Firebase, PostgreSQL

## Experience

**Software Engineering Intern** **January 2024 - Present**
*Hyperlink* *San Francisco, CA*

- Working on two teams to implement new full-stack features (using Next.js, React, PostgreSQL, Node.js) and to conduct unit testing and code refactoring for an artificial intelligence playground application.
- Spearheading a contextualized document generation feature featuring Retrieval-Augmented Generation (RAG) models using TypeScript, Node.js, and LlamaIndex.

**Software Engineering Intern** **July 2023 – September 2023**
*Notebook Labs (YC S22)* *New York, NY*

- Co-developed **Zephyr**, a decentralized, peer-to-peer cryptocurrency exchange application built using zk-SNARKs.
- Implemented a backend server in Node.js, JavaScript, Express.js, and Alchemy SDK with **15+ functions and 10+ API routes** for verifying captchas, calling smart contracts, and interacting with Amazon DynamoDB.
- Designed and applied over **40+ responsive frontend components** for interfacing with the Zephyr web application and the Zephyr landing page using React with Next.js, TypeScript, and TailwindCSS.
- Engineered **20+ backend functions** that connect the clientside to Ethereum networks, wallets, and servers (Email relayer, Zero-knowledge prover, Sybil-resistant server) using Node.js, Wagmi, ethers.js, and RESTful APIs.

**Scientific Computing Intern, TARGET Program** **June 2022 – August 2022**
*Fermi National Accelerator Laboratory (Fermilab)* *Batavia, IL*

- Constructed a hybrid camera and Neural Network overlay with Xilinx Vivado and HDL, allowing for simultaneous and low-latency Neural Network inferences with a webcam on Pynq-Z2 hardware.
- Produced a Computer Vision demo for FPGA architecture with Python, hls4ml, and OpenCV that can classify Pokémon with **83.5% detection accuracy.**
- Trained, optimized, and converted Convolutional Neural Networks into high-level synthesis language (HLS) for use with FPGAs with hls4ml, resulting in models with **95% prediction accuracy.**

## Projects

**Serenade** | *TypeScript, Next.js, Python, Convex, Flask*

- Developed a full-stack web application for an AI-powered personalized therapeutic listening experience.
- Created **10+ API routes** to connect APIs (Spotify, Replicate), Convex database, and models (MusicGen, GPT-4).
- Established front-end with **5 components** for seamless UI/UX using TailwindCSS, DaisyUI, and CSS animations.

**DiscoDB** | *Python, Flask, JavaScript, React, Recharts*

- Collaborated with UIUC students at HackIllinois on a NoSQL database storing data via Discord.
- Co-created **20+ functions** using Flask that handles CRUD, Queries, etc., between Discord and the database.
- Assembled a dashboard that charts **4 data points** from DiscoDB logs using JavaScript, React, and Recharts.

**NotifAI** | *JavaScript, React Native, Expo, Python, Flask*

- Co-designed an app that utilizes Computer Vision to scan text and give a summarization for Cohere's Hackathon.
- Built a React Native app with **6+ components** integrated with Google Vision AI for camera text extraction.
- Assisted in integrating a Flask backend with **3 API routes**, enabling word embeddings via Cohere AI's Embedding API.