Hector Cordero

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EDUCATION

University of Central Florida — Orlando, FL
Bachelor of Science in Computer Science — *Expected Spring 2027*
Relevant Coursework: Data Structures & Algorithms, OOP, Discrete Mathematics, Linear Algebra, Calculus I, II, III
Clubs/Organizations: ColorStack, SPHE, KnightHacks, Public Relations & Marketing Coordinator @ F1 AI Racer Research

EXPERIENCE

KnightHacks — Sep. 2025 – Present
Software Engineer — *Orlando, FL*
- Built and shipped registration/event pages in **Next.js (pnpm, Docker)**, scaling seamlessly to **1,200+** student signups.
- Implemented admissions/confirmation workflows and admin dashboards, processing **600+** hacker applications end-to-end.
- Containerized and documented the dev stack, cutting new-contributor setup time by **70%** and accelerating iteration.
- Established deployment with **Vercel** preview deploys **(typecheck, lint)**, cutting post-deploy hotfixes.

AAB Styles — Jun. 2025 – Aug. 2025
Software Engineer Intern — *Plantation, FL*
- Rebuilt jewelry product site using **React + Tailwind**, reducing CSS bloat, and setting a scalable UI across pages.
- Removed blocking scripts to speed page opens and smooth first-screen render for **8000+** users.
- Implemented client-side filtering/sorting + image **lazy loading** and to deliver **200 ms** updates across **150** products.
- Simplified navigation via **React Hooks/Context** to cut checkout from **7 to 4 clicks** in a sample purchase flow.

Undergraduate Research Study — Sep. 2023 – Mar. 2024
Sports Analytics — *Davie, FL*
- Quantified training impact in a **6-week pilot** for untrained long-distance runners (ages 18-21)
- Recorded pre/post 2-mile times and weekly splits **(Excel/CSV)** comparing plyometric vs usual plans.
- Analyzed outcomes in **Python (pandas)**, computing pre/post summary stats and visualizing trends with **Matplotlib**.
- Delivered a **4,250-word** report documenting methods, consent, and limitations, and proposing a scaled randomized study.

PROJECTS

InvestEd | *Next.js, TypeScript, Gemini 2.5 Flash, Zustand, shadCN, Vercel, Tailwind, GitHub* — Oct. 2025
- **3rd place out of 28** projects submitted to the Knight Hacks 2025 OneEthos AI for Financial Empowerment Challenge.
- Developed a **AI chatbot** to simplify financial terminology for students and provide investment guidance from user's stats.
- Built a Smart HYSA Finder with APY rankings, compound interest, and asset performance comparisons.
- Implemented Investment Dashboard with compound interest calculators and **S&P/ETF/crypto** performance charts.

MOVE | *Next.js, TypeScript, CV, MediaPipe Pose, TensorFlow, WebGPU/WebGL, Tailwind, GitHub* — Sep. 2025
- Shipped on-device **Computer Vision** dodge game for remote workers to reach daily exercise quota at **ShellHacks 2025**
- Uses **MediaPipe** model combined with **HTML 2D Canvas** to create detection points.
- Eliminated false hits by rendering and adding **EMA/hysteresis** to create pause window.
- Made it accessible to every audience through a minimalist design and progressive difficulty.

InsureFair | *React, CSS, JSX, GitHub* — Sep. 2024
- Delivered working demo for **insurance companies** to provide optimal insurance plan for users at **ShellHacks 2024**.
- Uses **React** and a built in **algorithm** to compare monthly premiums against life-expectancy input.
- Built single-page calculator **UX** in **React** with client-side state/logic for synchronized inputs/outputs.
- Coordinated with 3 teammates to scope features and ship the MVP within the hackathon deadline

TECHNICAL SKILLS

Languages: Python, Java, C, C++, HTML, CSS, JavaScript, TypeScript, SQL
Technologies: Next.js, AWS, MediaPipe, TensorFlow, React, Node.js, NextAuth.js, PostgreSQL, Prisma, Firebase, Matplotlib, Redis, Docker, Zustand, Vercel
Concepts: AI integration, APIs, Version Control, Front-End Development, Back-End Development, Computer Vision