COLIN PERRY

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Education

University of California, Los Angeles — **Los Angeles, California**
Bachelor of Science, Electrical Engineering — Sep 2019 – Jun 2023

Experience

Fullstack Software Engineer (Open Source) — **Mar 2025 – Present**
Mintplex Labs — *Santa Ana, CA*

- Owned and shipped critical full-stack features using Node.js and React + JS/TS to hundreds of thousands of users in a project with >50k GitHub stars
- Equipped non-agentic models with tool use by implementing the ReAct architecture, enabling reasoning and function calling for complex tasks and user queries
- Integrated a selection of additional embedding models for enhanced user experience and model flexibility
- Polished user interfaces to ensure performance, focusing on layout stability and user experience

Development Engineer — **Oct 2023 – Dec 2024**
UCLA Nanolab — *Los Angeles, CA*

- Engineered a Python/PyQt control interface with a custom physics library to validate inputs against hardware specifications, protecting wafer fab equipment and preventing $400,000+ in potential damage
- Built strong vendor relationships, negotiated discounts, and reduced inventory purchasing costs by over 20%
- Managed laboratory assistants to ensure ISO Class 5 cleanroom standards throughout lab spaces

Software Engineer/Blockchain Developer — **Jun 2021 – Sep 2022**
GYS Blockchain Solutions — *Mission Viejo, CA*

- Authored and deployed Solidity smart contracts, integrating them with Web3.js APIs, and built user interfaces using HTML/CSS and JavaScript
- Designed and executed unit tests for smart contract functions with Chai.js to ensure reliability
- Developed Python scripts to automate asset generation processes, streamlining development for artists
- Led a team of 4 software engineers, working with cross-disciplinary teams to meet aggressive deadlines on time and under budget
- Contributed to the generation of over $500,000 in revenue through the design and implementation of the project's tokenomics systems

Projects

Journal Club - Scientific Paper Sharing Platform

- Published a web and mobile application that enables users to post, browse, and discuss scientific papers via a social voting and comment system, supporting real-time contributions within scientific communities
- Developed clean and approachable UI/UX using TypeScript with React + Tailwind (webapp) and React Native + Nativewind (mobile)
- Integrated Firebase authentication for sign-in and Firestore as a real-time NoSQL database to store user-generated posts, comments, and votes
- Defined custom security rules as Express.js middleware to enforce access controls and validate user permissions, securing multi-user interactions

Wafer Defect Detection CNN

- Designed a Convolutional Neural Network in Python + PyTorch to detect defects in wafer maps
- Utilized synthetic minority oversampling to address data imbalances and improve overall model performance
- Leveraged cloud computing resources via GCP to train the model with optimized hyperparameters, achieving an overall test accuracy of nearly 95%

Skills

Languages & Frameworks: JS/TS, React/React Native, TailwindCSS, Python, Go, C/C++
Backend & Infrastructure: Kubernetes, Docker, Linux, CI/CD, SQL(PostgreSQL, SQLite), NoSQL(Firestore)