RAYMOND FORMAN

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SOFTWARE ENGINEER

Passionate Computer Science student at Columbia leveraging AI/ML and full-stack development to create innovative, user-focused solutions. Experienced in building scalable systems, collaborating across teams, and applying technology to tackle challenges in fintech, sustainability, and beyond.

Key Skills

Technical: Python, SQL, JavaScript/React, Typescript, Node.js, Flask, REST APIs, HTML/CSS, Git, PyTorch, Scikit-learn, Java, C, C++, C#, CUDA, OAuth, Applied Mathematics, NLP, RAG, UI/UX Design, Front-End, Back-End, Full Stack Development
Non-technical: Product Strategy, User-Centric Design, Data-Driven Decision-Making | Leadership: agile workflow, cross-functional coordination | Technical Writing, System Design | Bi-lingual: English/Spanish

Education

Bachelor of Arts in Computer Science & Business Management
COLUMBIA UNIVERSITY, MAY 2025, CURRENT GPA: 3.66

RELEVANT COURSEWORK: NATURAL LANGUAGE PROCESSING, DEEP LEARNING FOR COMPUTER GRAPHICS, APPLIED COMPUTER VISION, ARTIFICIAL INTELLIGENCE, 3D USER INTERFACES & AUGMENTED REALITY, DATA STRUCTURES, STRATEGY FORMULATION, LEADERSHIP IN ORGANIZATIONS

Experience & Community Leadership

GENTINE LAB: LEARNING THE EARTH WITH ARTIFICIAL INTELLIGENCE AND PHYSICS (LEAP)　　　　　AUG 2024 - PRESENT
Junior Software Engineer
- Developing an automated LLM code translation pipeline to build the world's first Python-based climate model. Product revolutionizes climate data accessibility and empowers researchers with ML techniques and modern GPU computing power.
- Implemented a Retrieval Augmented Generation module using Abstract Syntax Trees and example translations that improved Claude Sonnet 3.5 Fortran-to-Python translation times by 60% and reduced manual coding errors by 30%.

COLUMBIA CLIMATE SCHOOL　　　　　SEP 2022 – PRESENT
Partner Management Intern
- Created, maintained, and refined the Columbia Climate School Partner Database of philanthropic research funders and partners using SQL BigQuery and a full-stack application framework.
- Managing 50+ partnerships with institutional climate investors including the Bezos Earth Fund, Bloomberg Philanthropies, and Rockefeller Foundation to fund Columbia research in AI, Sustainable Finance, and Extreme Weather Resilience.

EARNEST ANALYTICS　　　　　JUN 2024 – AUG 2024
Data Analytics Intern
- Conducted in-depth analysis of proprietary consumer transaction data and corporate filings using advanced SQL queries, delivering actionable insights into financial health and performance ahead of quarterly earnings.
- Contributed a new key indicator to an earnings prediction algorithm leveraging consumer transaction data and machine learning techniques, improving predictive accuracy by 5% to better inform client decision-making.
- Collaborated with data engineering, finance, and analyst teams to deliver insights to Fintech and financial institutions.

SUSTAINABLE U: CLIMATE STARTUP　　　　　MAR 2022 – FEB 2023
Founding Engineer
- Spearheaded the application design for a campus app using a Swift / Node.js tech stack, enabling discovery and attendance of 50+ sustainability events within the first three months post-launch.
- Conducted beta testing with 10+ student organizations, integrating feedback to improve engagement by 30%.
- Delivered an MVP within 6 months, achieving 85% retention through iterative product development.

Projects

ROBINHOOD ALGORITHMIC TRADER (FULL STACK)　　　　　JUN 2024 – AUG 2024
- Developed an end-to-end algorithmic trading program leveraging the Robinhood API to automate cryptocurrency trading, utilizing key financial and qualitative indicators to optimize personal financial management.
- Created a high-frequency sentiment analysis system integrating Reddit and X APIs with OpenAI's GPT-3.5 to monitor and update crypto-related sentiment in real time, enabling data-driven trading decisions.

SPOTIFY AI PLAYLIST GENERATOR (FULL STACK)　　　　　JUN 2024 – AUG 2024
- Built a web app using React/Node.js and the OpenAI API to generate Spotify playlists from natural language using GPT-3.5.
- Designed a Python microservice mapping text to Spotify's 11 audio features, integrating OAuth, REST APIs, and database functionality across three services. Tech stack: React, Node.js, Flask, OpenAI API, Spotify Web API.