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: 3.61

RELEVANT COURSEWORK: NATURAL LANGUAGE PROCESSING, DEEP LEARNING FOR COMPUTER GRAPHICS, APPLIED COMPUTER VISION, 3D USER INTERFACES & AUGMENTED REALITY, DATA STRUCTURES, ECONOMIC & FINANCIAL METHODS FOR SUS. DEV., 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%.

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.

COLUMBIA UNIVERSITY BETA THETA PI   DEC 2022 – DEC 2023
Fraternity President
- Directed a 10-person executive board, overseeing a $50,000 budget to organize 100+ events and increasing the budget by 48% through strategic on-campus partnerships.
- Established new traditions, including the House Improvement Fund, Brotherhood Retreat, and Spring Philanthropy Concert, driving member engagement by 42%.

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.