COLUMBIA UNIVERSITY rayforman.com | (703) 762-6486 | raymond.forman@columbia.edu

RAYMOND W. FORMAN

Passionate Computer Science graduate from Columbia leveraging AI/ML and full-stack development to create innovative, business-focused solutions that deliver measurable client value. Experienced in translating technical capabilities into business outcomes through collaborative development, client-focused demos, and data-driven implementation.

Key Skills

Technical: Python, SQL, JavaScript/React, Typescript, Node.js, Flask, REST APIs, HTML/CSS, Git, PyTorch, Hugging Face, Scikit-learn, Java, C, C++, C#, CUDA, OAuth, Jupyter, NLP, RAG, UI/UX Design, Front-End, Back-End, Full Stack Development
Non-technical: Use Case Exploration, User-Centric Design, Data-Driven Decision-Making, Technical Presentations, Stakeholder Management | **Leadership:** Agile Workflow, Cross-Functional Coordination | **Bi-lingual:** English/Spanish

Education

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

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

Work Experience

COLUMBIA EARTH CENTER: LEARNING THE EARTH WITH ARTIFICIAL INTELLIGENCE AND PHYSICS (LEAP) AUG 2024 - PRESENT
Software Engineer & Researcher
- Developing an automated LLM code translation pipeline to build a novel Python-based climate model to utilize GPU 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%.
- Led bi-weekly technical demonstrations for climate researchers, translating complex AI concepts into accessible presentations that increased researcher adoption by 45% and gathered feedback to refine user experience.

COLUMBIA CLIMATE SCHOOL SEP 2022 – MAY 2025
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 analysis of 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 develop and present technical insights to non-technical stakeholders at financial institutions, resulting in 3 new client acquisitions based on demonstrated value propositions.

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 customer 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 financial management.
- Created a high-frequency sentiment analysis system integrating Reddit and X APIs with OpenAI's GPT-3.5 LLM 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 React/Node.js web app using OpenAI's GPT-3.5 to generate Spotify playlists from natural language, with a Python microservice mapping strings to music that increased music discovery by 25% and saved users 40% time in playlist creation.