

# JACOB IRELAND

Bronx, NY

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## EDUCATION

### Columbia University

Sep. 2020 – May 2024

*Bachelor of Arts, Columbia College*

*New York, NY*

- Major: Computer Science, GPA: 3.68, Dean's List
- Men's Varsity Cross Country and Track and Field, competed as a 3-season NCAA D1 athlete
- 2023 Academic All-Ivy, Columbia 8th all-time in 3000m Steeplechase, 6th all-time in indoor 5000 meter

## SKILLS

**Languages:** Python, JavaScript, SQL, HTML/CSS, C/C++, Java

**Software:** React JS/Native, Node.js, MySQL, MongoDB, Git, Google Cloud VM, WSL, Figma, Balsamiq, VMWare Workstation Pro, VS Code, LaTeX, Microsoft Power Apps

**Relevant Coursework:** User Interface Design, Computer Networks, Operating Systems in Linux, Advanced Programming in C, Intro to Databases, Programming Languages and Translators, Artificial Intelligence, Data Structures in Java

## WORK EXPERIENCE

### Project Management Intern

Jun. 2023 – Current

*YMCANYC Property Management Department*

*New York, NY*

- Built 10+ custom work flows using 3-tier database architecture to populate management database system with user-generated content for centralized collaboration between management team.
- Created a website to act as a central location for communication between project management team and organization sub-branches, informing branches on project timelines, resources, and contacts.
- Facilitated integration of a new software for daily use of all organization employees, training over 100 employees through guided walk-throughs and technical problem resolutions.
- Assisted with monitoring project progress, developing project plans, and coordinating project timelines between management, branches, and vendors.

### Teaching Assistant for Data Structures in Java

Sep. 2022 – Dec. 2022

*Columbia University*

*New York, NY*

- Led weekly office hours to instruct students on the understanding and implementation of essential topics and data structures in Java.
- Attended weekly staff meetings to develop exam questions and review strong and weak points in teaching curriculum.

## PROJECTS

### Cryptocurrency Application | Python, Google Cloud VM

May 2024

- Implemented a distributed blockchain as a linked-list of block structures, utilizing a proof-of-work algorithm to ensure chain validity.
- Developed a custom Peer-to-Peer protocol allowing for consistent packet formation, sending, and receiving, allowing for a network of up to 15 nodes to effectively communicate via TCP connections.
- Built a simple cryptocurrency application on top of the distributed blockchain, implementing traders that initiate wallet transactions and miners that verify transactions and mine blocks to append to the blockchain.

### IOS Mobile Application - MoodMates | React Native, Backendless, JavaScript

Nov. 2023

- Performed contextual inquiries & user studies to develop pixel-perfect Figma prototypes, utilizing user-centered design techniques.
- Collaborated with group to design and code React Native mobile application that allows users to share their current mood and energy status and connect with others in ways that align with how they're feeling.
- Utilized cloud database software to store user data and implemented API calls to read this data and display it throughout the app, creating a personalized experience for every user determined by their inputted mood and energy.

### Data Manipulation Language API | Python, MySQL

Apr. 2023

- Developed an API that allows users to read, create, update, and delete entries in a database.
- Parsed user inputs to format MySQL queries (SELECT, INSERT, DELETE, UPDATE) and executed them on a given database to manipulate data and produce the user's desired results.

### Personal Website Portfolio | JavaScript, HTML/CSS, React JS

July 2022

- Developed a personal website portfolio that anyone can access to view my experience, projects, and career interests and launched it under the domain [www.jacobireland.org](http://www.jacobireland.org).
- Built in VS Code using React JS, Javascript, HTML, and CSS during summer 2022 as a personal project.

## LEADERSHIP / ATHLETICS

### Team Captain

2023-2024

*Men's Cross Country and Track and Field*

- Led weekly meetings to discuss team strengths and weaknesses, assessing individual and team responsibilities, goals, and conflicts, to develop methods to further our academic and athletic success.
- Facilitated communication between athletes and coaches, collaborating with other captains to ensure all athletes had equal opportunities and developed healthy relationships with coaches and team mates.