

RICHARD LOPEZ

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EDUCATION

Columbia University, Columbia College – New York, NY

Expected Graduation 05/2022

Bachelor of Arts in Computer Science, Ethnicity and Race Studies

COURSEWORK AND LANGUAGES

Relevant Courses: Systems Programming in C • Artificial Intelligence • Computer Networks • Databases • Data Structures and Algorithms • Linear Algebra • User Interface Design

Languages: Python, Java, JavaScript, HTML/CSS (fluent) • React, C, Ruby, Rails (proficient) • Git • Spanish (native) • Mandarin (beginner)

PERSONAL PROJECTS

Transparent Democracy

- Informs users about current or previous legislative actions in Congress, such as roll call votes, bill information, and member information
- Utilizes ProPublica API to gather data on legislative procedures (React, JavaScript, Fetch API, HTML/CSS)

Sorting Algorithm Visualizer

- Demonstrates sorting algorithms such as insertion, selection, and merge sort using animated graphs (JavaScript, HTML/CSS, Python)

Richard Lopez Codes Website

- Developed personal website to showcase programming projects and skills. (Python, JavaScript, HTML/CSS)

RELEVANT CLASS PROJECTS

N – Puzzle Solver

- Created n-puzzle solver that incorporates breadth-first search, depth-first search, and A* search (Python)

Distance Vector Routing

- Implemented Bellman-Ford algorithm for updating routing tables to determine the optimal path amongst nodes in a network (Python)

Perceptron Learning Algorithm and Linear Regression

- Utilized perceptron learning algorithm to form decision boundaries for linearly separable data sets
- Built linear regression model to predict heights of individuals from CDC growth chart data; used gradient descent to capture optimal weights for the model using age and body weight data as features (Python)

EXPERIENCE

Cereal - Columbia Build Lab

May 2021 – September 2021

Full Stack Software Developer – New York, NY

- Lead development of web application that improves users' decision-making by aggregating and evaluating scraped website data (HTML/CSS, JavaScript)
- Implemented RESTful API to connect front-end HTML and JavaScript with back-end SQLite database (Python)
- Developed Chrome extension to aid in the process of importing data from websites (Chrome API, Manifest V3)

Morgan Stanley - Private Wealth Management

July 2019 – August 2019

Intern – Los Angeles, CA

- Interned for Zager fixed income management, overseeing \$10.2 billion in assets under management
- Assisted with daily operations including performing market research, gathering information for and analyzing client portfolios, and organizing materials for client meetings

LEADERSHIP, MENTORSHIP, ACTIVITIES

Right to Code

July 2020 – Present

Co-Founder and Instructor

- Partnered with the Young Eisner Scholars program to launch introductory computer science course (Java programming) for middle school and high school students living in underserved communities

Multicultural Affairs Board Member

September 2019 – Present

First-Generation, Low-Income Student Advisor

- Serve as an advocate for students who identify as first in their family to attend college and/or are low-income (FLI students)
- Work alongside Deans, the Financial Aid Office, and other administrative staff to outline and execute strategies that improve experiences of FLI students

Columbia Mentorship Initiative

September 2020 – Present

Latinx Family Tree Mentor

- Serve as mentor to first-year undergraduate students, helping them navigate the challenges of being FLI students at Columbia
- Coordinate with other mentors to provide significant guidance for our mentees: navigating degree requirements, course selection, and accessing vital campus resources

HONORS, AWARDS, SCHOLARSHIP

- Hispanic Scholarship Fund (2020, 2021), Young Eisner Scholar (2013 – Present), Partnership Scholars Program (2018), Choate Icahn Scholar (2018)
- 2nd place in age group at the Brooklyn Go Hard or Go Home Half Marathon (2020); 3-time marathon finisher (2016-2017)