

Matthew Chan

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GitHub: github.com/mattchann

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EDUCATION

Cornell University – College of Engineering

Ithaca, NY

B.S. Computer Science / Minor in Information Science (UI/UX) / GPA: 3.867

Expected May 2024

- Coursework: Analysis of Algorithms, Machine Learning, Object-Oriented Programming & Data Structures, Functional Programming, Discrete Structures, Computer Systems Programming, Fundamentals of Robotics, Modern Web Development, Operating Systems, Database Systems, Linear Algebra, Multivariable Calculus, Rapid Prototyping and Physical Computing
- Activities: BreakFree Dance Team (Social Director), Chinese Student Association

PROJECTS

Big Red Talks – Backend Developer

January 2022

iOS mobile application for live location-based campus messaging between verified Cornell students

- Developed custom RESTful API for management of user preferences and message logs using Node.js, Express, and MongoDB
- Collaborated in team of 5 to integrate pieces of the application by hosting backend application on Heroku for remote access

Reddit Stock Bot – Software Engineer

March 2021 – May 2021

Stock trading bot to automate portfolio based on Reddit sentiment with learned weight optimization

- Worked in team of 4 to develop novel weighting algorithm to compare stocks mentioned on subreddits considered
- Implemented language sentiment analysis according to VADER model and web scraping of Reddit posts entirely in OCaml
- Spearheaded development of unit tests to maintain functionality and integrate optimization weight correction over time

Kairosclerosis – Full-Stack Developer

April 2020 – May 2020

Global visualization to analyze locational impact on factors corresponding to happiness

- Designed and implemented website layout according to dataset utilized to most effectively convey information/draw insights
- Implemented interactivity of website using D3.js to map data to respective country elements with full zoom/pan functionality

Graphics Engine – Software Engineer

January 2020 – June 2020

A graphics engine built from scratch to handle basic shapes, lighting, and animation with MDL file interpretation

- Implemented geometries of lines, polygons, and complex 3D shapes with shading, lighting, and color effects
- Developed matrix transformations, animations, and coordinate systems with complex easing effects between frames

Solon – Frontend Developer/Marketing Assistant

August 2019 – February 2020

Mobile application to facilitate parental involvement in schools by providing digital access to voting and updates from faculty

- Developed custom loading animation using Flutter for cross-platform deployment and improved user experience
- Marketed application to potential investors and school administration for integration while adhering to existing bylaws
- Worked in team of 5 to research target audience and focus development on common parent school involvement barriers

EXPERIENCE

My Friends Place NY Inc. – Tutor

Remote | July 2021 – August 2021

- Developed tailored math curriculums and lesson plans catered to several classes of students of varying grades: K-5, 6-8, 9-12
- Led research and teaching of new material to students while providing personalized tutoring to allow for ease of understanding

FTC Robotics Team 479 – Co-President

New York, NY | June 2018 – June 2020

- Organized weekly team meetings for 20+ people to design/build competition robots from scratch using constrained materials
- Competed by driving/pitching the team robot in NYC championship competitions consecutively and won nine separate awards
- Created and led new elementary school extracurricular robotics programs using LEGO to teach engineering and coding skills
- Developed relationships with teams internationally to help mentor and foster growth by sharing knowledge/strategies/skills

SKILLS

Languages Java, JavaScript, TypeScript, HTML/CSS, C, Python, OCaml, SQL

Technologies Git, React, Node.js, Express, Firebase, MongoDB, Postman, Flask, Jinja, D3.js, Heroku, Bootstrap, GSAP

Interests Volleyball, Dance, Robotics, Iced Coffee