

Bryan Xu

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Education

University of California, Santa Barbara

Master of Science in **Computer Science**

Expected: 06/2023

Bachelor of Science in **Computer Science**, Honors Program | GPA: 3.9

Expected: 06/2022

Relevant Upper Division Coursework: Data Structures & Algorithms I/II, Probability & Statistics I/II, Artificial Intelligence, Machine Learning, Operating Systems, Computer Architecture, Databases, Programming Languages, Human Computer Interaction, Teaching Methods in CS, Senior Capstone Project, Mobile App Development

Internship Experience

Quantitative Analysis Researcher, Prudential Financial | Python, QuantLib

06/2021 - 08/2021

- Researched on machine learning/statistical models used to predict stock market outcomes
- Wrote functionality to integrate ARIMA models and Random Forest models with open-source backtesting libraries to predict stock market prices and automated backtesting with historical stock market data
- Designed functions to calculate financial statistics based on backtesting strategies and outcomes
- Navigated in-house code base to create multiple financial instruments and corresponding pricers

Project Experience

T.A.L.K. | MongoDB, Express, React, Node - Capstone Project

03/2022

- 6 month project with Invoca to create a full stack web app, providing critical call information in a single view
- Produced an intuitive multi-cloud service, showing sales agents additional call information including the most important keywords, a summary, and sentiment analysis - all obtained from near real-time call transcriptions

Chat With Me | React, Node, GraphQL

02/2022

- Created real-time chat application that supports multiple chat rooms and concurrent users
- Users can create custom chat rooms and designate usernames, and join group chats or create private chats
- Winner in "Best React + GraphQL App" category at SB Hacks VIII

My Memories | MongoDB, Express, React, Node

01/2022

- Full Stack Web App allowing users to create, like, delete, and edit posts, including an authentication system
- Built using Google OAuth and native user database, allowing for different functionalities while logged in

Pacman AI | Python

03/2021

- Used Markov Decision Process to create basic Pacman AI that can react to ghosts, food, and power pellets
- Pacman completed game (ate all food without dying) with 70% success rate against two semi-random ghosts

Discord Icebreaker Bot | Discord.js

01/2021

- Implemented 10+ commands, including music player and icebreaker games. Currently active in 40~ servers
- Finalist in "Best Beginner Hack" category at SB Hacks VII

Leadership Experience

Undergraduate Learning Assistant, CMPSC16

01/2021 - 03/2021

- Mentored students in basics of object oriented programming such as recursion and polymorphism in CMPSC16, an engineering course for freshmen students focused on developing core programming skills
- Held weekly office hours and ad hoc help sessions for students requiring assistance outside of lecture hours
- Reviewed and updated weekly lab assignments and homework assignments to ensure coherence

Founder/President, UCSB Badminton Club

09/2018 - present

- Practiced large project management and organizational skills by hosting UCSB's first annual collegiate badminton tournament. Consulted multiple departments and organized committees to distribute workload
- Took the initiative to motivate, interview, and organize individuals to establish UCSB's first badminton club, recruiting 100 students over four years

Skills

Programming Languages: C++, Java, JavaScript, C, Python, R, SQL, OCaml, MIPS Assembly Language

Other Technologies/Skills: Spring Boot, React.js, HTML, CSS, LaTeX, Git, GitHub, Bitbucket, Heroku, Node.js,

Discord.js, GraphQL, Adobe Illustrator, Adobe Indesign, Adobe Photoshop, Microsoft Office