Bryan Xu

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Education

University of California, Santa Barbara
*Masters of Science in **Computer Science***   **Expected: 06/2023**
*Bachelor of Science in **Computer Science**, Honors Program |GPA: 3.89*   **Expected: 06/2022**
Relevant Upper Division Coursework: Data Structures & Algorithms I/II, Probability & Statistics I/II, Artifical Intelligence, Machine Learning, Operating Systems, Computer Architecture, Databases, Automata & Formal Languages, Programming Languages, Human Computer Interaction, Teaching Methods in CS, Senior Capstone Project

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