

Bryan Xu

(408) 660 7733 - bryanxu@ucsb.edu - <https://xuperbryan.github.io> - <https://www.linkedin.com/in/bryan-bx-xu/>

Education

University of California, Santa Barbara

Master of Science in **Computer Science**

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

Expected: 06/2023

Completed: 06/2022

Internship Experience

Software Engineer Intern, Meta | Python, C++

06/2022 - 09/2022

- Set up training pipelines and wrote design docs to approve new joint optimization machine learning model
- Trained and compared 200+ machine learning models using internal framework, where metrics were calculated from online experiments over multiple days, and selected top performers for integration
- Created joint optimization model with over 0.9% normalized entropy gains over current ads delivery models

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

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

Leadership/Research Experience

Graduate Researcher, Programming Languages Lab

03/2022 - present

- Researching the use of modern fuzzing techniques to automatically and systematically generate numerous (10,000+) smarter test cases for Computer Science education

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

Founder/President, UCSB Badminton Club

09/2018 - 06/2022

- Developed 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 over 100 students across four years and competing in over 15 collegiate meets and competitions

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