Bryan Xu

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Education

University of California, Santa Barbara
Masters in ***Computer Science*** **Expected: 06/2023**
Bachelor of Science in ***Computer Science****, Honors Program |GPA: 3.88* **Expected: 06/2022**
Relevant Upper Division Coursework*:* Data Structures & Algorithms I/II, Intro to Computational Science, Automata & Formal Languages, Probability & Statistics I/II, Artifical Intelligence, Machine Learning, Operating Systems, Computer Architecture, Teaching Methods in CS

Project Experience

Coronavirus Survival Classifier | *C++* **02/2021**
- Implemented a Naive Bayes Classifier to predict whether a person with the given symptoms would survive
- Trained on a public dataset of 275,000+ test cases, with an unbalanced ratio of 94:6 negative cases. Reached 88% accuracy and < 2 second running time on a sample validation set of 23,000+ test cases (72:28 negative)

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 a 70% success rate against two ghosts

Discord Icebreaker Bot | *JavaScript* **01/2021**
- Created a discord bot as a project during SB Hacks VII, primarily using Node.js, Discord.js, and Heroku.
- Implemented 10+ commands, including APIs calls and icebreaker games. Currently running in 50~ servers.
- Finalist in the "Best Beginner Hack" category

Internship Experience

Quantitative Analysis Researcher, Prudential Financial **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

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
- Help manage $2,000 club budget. Invested $1,000 into hosting a regional-scale badminton tournament, returning 50% (gained $500) over the span of one month
- Organize transportation and oversee team trips to other universities and cities, including UCLA, UCSD and Cal Poly Pomona, reducing costs (40%) per trip by comparing multiple housing and travel plans
- Took the initiative to motivate, interview, and organize individuals to establish UCSB's first badminton club, recruiting 70 students over three years

Skills

Programming Languages: C++, Java, JavaScript, C, Python, R, SQL, MIPS Assembly Language
Other Technologies/Skills: Spring Boot, React, HTML, CSS, LaTeX, Git, GitHub, Bitbucket, Heroku, Node.js, Discord.js, VS Code, agile methodology, Adobe Illustrator, Adobe Indesign, Adobe Photoshop, Microsoft Office