Andy Kuei

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Education

University of California, Irvine June 2022

Bachelor of Science in Computer Science

Bachelor of Science in Mathematics

Technical Skills

Coding Languages: Python, C++, C, Java, SQL, Matlab, Mathematica, HTML, CSS, Prolog, Lisp

Tools: Git, Bash, Salesforce, mltools, Scikit-learn, NumPy, Excel, LaTex

Computer Science Coursework: Design & Analysis of Algorithms, Software Engineering, Machine Learning & Data Mining, Intro to Artificial Intelligence, Data Management, Search Engines, Compilers & Interpreters, Probability in CS, Computer Networks, Principal in System Design

Mathematics Coursework: Numerical & Complex Analysis, Linear Algebra, Abstract Algebra, Probability, Optimization

School Projects

Sports Bot Jan 2021 - Mar 2021

- Used Machine Learning Pipeline, sequence to sequence model, and PyTorch library to create a conversational chatbot capable of responding to user questions
- Created corpus to train the chat bot by collecting 100,000+ reddit post and comment pairs parsed as json files
- Lead testing of the Sports Bot through user studies and organized the presentation of data to peers and advisors

Food For Thought iOS Application Jan 2021 - Mar 2021

- Developed an iOS health application in a team of three that took a user's physical health data and gave diet recommendations to achieve goals set by the user
- Designed frontend of the app through Swift for iOS and built the backend database using MongoDB
- Queried nutritional info from Spoonacular API and web scraped fast food chains into SQL queries

Minesweeper Artificial Intelligence Mar 2020 - Jun 2020

- Implemented subsets, matrices, and probabilistic algorithms to play the game of minesweeper
- Used Python and Python libraries such as NumPy to perform Gaussian Elimination to solve solutions on frontier
- Achieved fourth place in a class tournament of 200 students with a functional minesweeper solver capable of solving 400 of 1000 games on a 16x30 board with 99 mines, 500 of 1000 games on a 16x16 board with 40 mines, and 900 of 1000 games on a 9x9 board with 10 mines

Experience

Internship - Virtual Student Federal Service Sep 2020 - May 2021

U.S. Department of Human and Health Services | Irvine, CA

- Collaborated in a team of four to prototype the Grants.gov website in Salesforce to modernize the website. This allows for single user sign in and it provides simpler user interface for finding and applying for grants
- Investigated Salesforce features such as user permissions, profiles, and object sharing roles to determine if Grants.gov can leverage them for further improvements
- Saved the U.S. government millions of taxpayer dollars through prototyping this single sign-on noninvasive recipient portal for grantors and grantees

UCI ICS Lab Tutor | Irvine, CA Jan 2021 - Dec 2021

- Advised and taught first year UCI Informatics and Computer Science students about Python and assisted them with their first programming class
- Provided lab hours to teach Object Oriented Programming concepts, data types & structures, functions in Python
- Helped students pass their classes through guidance and tips on their labs and provided safe spaces where students are encouraged to reach out to staff

The Coder School Tutor | Irvine, CA Jun 2021 - Nov 2021

- Taught kids between the ages of 8-16 Python on a weekly basis
- Guided students through OOP, functions, recursion, searching and sorting techniques, and data structures
- Established relationships with young students to further their academic success and pursue computer science