

Joseph Yu

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY

B.A. COMPUTER SCIENCE & STATISTICS
 Grad. May 2022 | Berkeley, California
 Cum. GPA: 3.61 / 4.0

GLENDA DAWSON HIGH SCHOOL

Grad. May 2018 | Houston, Texas
 Cum. GPA: 4.0 / 4.0

COURSEWORK

UNDERGRADUATE

Structure and Interpretation of
 Computer Programs
 Data Structures
 Great Ideas in Computer Architecture
 Efficient Algorithms and Intractable
 Problems
 Discrete Mathematics and Probability
 Theory
 Linear Algebra

SKILLS

PROGRAMMING

Over 1000 lines:
 Java • C • Python • Assembly • NumPy
 • Pandas

Over 500 lines:
 HTML • CSS • JavaScript • Scikit-Learn

Familiar:
 OpenMP • AWS • Gurobi Optimizer •
 Spark • SIMD • PyTorch • \LaTeX

LANGUAGES

Fluency
 English • Mandarin

ORGANIZATIONS

STUDENT ASSOCIATION OF APPLIED STATISTICS

- Operated on datasets using the Scikit-learn machine learning library for classification and regression
- Worked with other members on modeling real data using k-nearest-neighbors, decision trees, and neural networks

PROFESSIONAL EXPERIENCE

UC BERKELEY ELECTRICAL ENGINEERING AND COMPUTER SCIENCE | ACADEMIC INTERN

Jan 2019 - May 2019 | Berkeley, CA

- Academic Intern for CS61A: Structure and Interpretation of Computer Programs
- Debugged Python and SQL assignments and projects during labs and office hours.
- Explained concepts such as recursion, functions, and trees.

CODE NINJAS | COMPUTER SCIENCE TUTOR

June 2017 - Aug 2018 | Houston, TX

- Educated children between the ages of seven and fourteen on the fundamentals of game and website creation.
- Taught children JavaScript, HTML, CSS, and Scratch.

PRIVATE TUTORING | COMPUTER SCIENCE PRIVATE TUTOR

Aug 2017 - July 2018 | Houston, TX

- Worked as a private computer science tutor for a brother and sister who were seven and eight, respectively.
- Taught them the basics in website and game creation using HTML, CSS, and JavaScript.

PROJECTS

DATA CONSULTING FOR GRANDMARK INTERNATIONAL

Sept 2019 - Dec 2019 | Berkeley, CA

- Developed a web application using Python Flask for a car parts company in South Africa.
- Built a model to help forecast demand of car parts as well as dates of peak sales, optimal dates to restock, and how to minimize lost sales.

ASSEMBLY NEURAL NETWORK Oct 2019 | Berkeley, CA

- Developed a Convolutional Neural Network to classify handwritten numbers using RISC-V, an Assembly language.

RANDOM WORLD GENERATOR April 2019 | Berkeley, CA

- Used to Java to build an engine that can generate a 2D-tile based map with random rooms and hallways to explore similar to retro NES games
- Added the ability for the user to interact with the world and "win" conditions.

BEARMAPS April 2019 | Berkeley, CA

- A web application that will display a map of Berkeley and find the shortest path between two locations
- Uses KDTrees and TrieSet as Data Structures and A* algorithm to find shortest path

KAGGLE DOG BREED COMPETITION

April 2019 | Berkeley, CA

- Analyzed how features such as breed, color, and description can affect the adoption speed of a stray dog or cat
- Built a model using K-nearest-neighbors to predict adoption speed of a stray from their age, description and health.