

Kyle Tsuji

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- US Citizen -

EDUCATION

University of California, Davis

Davis, California

Bachelor of Science in Computer Science

September 2019 - December 2023

- **Highlighted Courses:** Artificial Intelligence, Machine Learning, Operating Systems, Computer Architecture, Algorithm Design and Analysis, Assembly Language Programming, Game Theory, Data Structures, Object-Oriented Programming, Technology Management

COURSEWORK AND PROJECTS

- **Blackjack Game (JavaScript, HTML/CSS)** - kyletsuji.github.io/portfolio/#projects - Practiced front-end web development by creating a web application that allows a user to play blackjack against a simulated dealer who hits until at least 17. Utilizes JavaScript DOM Manipulation and includes functions to shuffle cards, deal cards, and calculate the optimal value of a hand given that aces can be 1 or 11.
- **Deep Neural Network (Python)** - Worked in a group of 4 to design and implement a deep neural network that can detect multiple kinds of network traffic intrusions using an IoT Intrusion dataset. Practiced data preprocessing by normalizing attributes and used one hot encoding for output classes. Created an initial model which was improved upon multiple times by removing undersampled classes, and adding more hidden layers/nodes. Each model was fit with training data and analyzed with testing data, and the results of each model were compared.
- **Memory Allocator (C)** - Implemented a memory allocator that can allocate memory to users and free memory. Requests bytes from the OS during initialization, then returns a requested size of memory to the user. A free list is used to track available memory space and coalesce adjacent free space.
- **Unix Utilities (C)** - Built alternate versions of the commonly used UNIX commands *cat*, *grep*, *zip*, and *unzip*, called *wcat*, *wgrep*, *wzip*, and *wunzip*.
- **Probability Distribution Analysis (R, Latex)** - Collaborated with two other peers to find real world datasets represented by normal, exponential, gamma and beta families in order to analyze density, maximum likelihood estimators, and method of moments estimators.

TECHNICAL SKILLS

Javascript, Python, C++, Java, R, C, HTML/CSS, SQL, Unix, MatLab, Erlang, Prolog, Haskell, Github, Latex, Google Colab, Google Suite

EMPLOYMENT & INTERESTS

Current Employment: (February 2024 - Present) Tutor at Mathnasium - Teaching STEM subjects to students in high school and below, working collaboratively with instructors to ensure optimized learning

Involvement: Former piano teacher and youth basketball assistant coach

Volunteer Work: Roundhouse Aquarium, Pediatric Therapy Network

Interests: Competitive basketball player, sports fanatic, admirer of traveling