Patrick Yin

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EDUCATION

University of California, Berkeley | B.A. Computer Science, Applied Mathematics **May 2023**

- GPA: 4.00
- Regents' and Chancellor's Scholar - Merit-based scholarship for the top 2% of undergraduates at UC Berkeley
- Relevant Coursework: Artificial Intelligence (CS 188), Discrete Mathematics and Probability Theory (CS 70), Designing Information Devices and Systems (EE 16A/B), Multivariable Calculus (Math 53), Data Structures (CS 61B), Structure and Interpretation of Computer Programs (CS 61A)

PROJECTS

Machine Learning Projects **December 2019 – February 2020**

- MNIST Neural Network: Created a deep neural network from scratch generalized for any number of layers and neurons, using MNIST sample data as the training, validation, and test sets for the neural network
- Tic-Tac-Toe with Reinforcement Learning: Leveraged reinforcement learning in tic-tac-toe by training two agents to play against each other and using their policy to make one of the trained agents play against a human
- Shakespeare Text Generator with Recurrent Neural Network: Utilized TensorFlow to generate text using a character-based Recurrent Neural Network based on Shakespeare's writings

Phyzmo **October 2019 – December 2019**

- Reduced university course cost by over $100 per student by constructing cross-platform application leveraging computer vision to help students visualize kinematic data for physics labs–published to App and Google Play Store
- Designed application to track moving objects and create visuals based on recorded data using Cloud AutoML
- Tech Stack: GCP Vision API, GCP Cloud Functions, GCP Storage, OpenCV, Firebase, Python, Java, Swift

Absent **September 2019 – October 2019**

- Launched iOS app coaching non-native speakers to improve their accent by analyzing their voice recordings
- Utilized cosine similarity algorithm and word-level confidence analysis to dissect accent and provide feedback
- Tech Stack: GCP Speech-to-Text API, GCP Cloud Functions, GCP Storage, Firebase, Python, Swift

MultiFit **August 2019 – September 2019**

- Devised a personal workout log merged with crowdsourced workout programs using Google Firebase
- Managed team of 3 by holding weekly debriefs and enforcing deadlines using ClickUp and Trello
- Tech Stack: Google Firebase (Authentication, Storage, Realtime Database), Swift

FeeSplitter **June 2019 – August 2019**

- Invented a web application tracking shared expenses and balances between roommates, friends, and family
- Tracked over $5000 in transactions between users, helping them conveniently optimize their finances
- Tech Stack: Javascript (Node.JS, Express.JS, React.JS), HerokuApp Deployment, HTML, CSS, SQL

EXPERIENCE

Preclinical Medevice Innovation (PMI) | Intern **June 2018 – August 2018**

- Initiated and built a database of all animal studies conducted by PMI, saving Quality Assurance and Regulatory Affairs employees over 300 hours and counting when searching through their 3000+ historical studies
- Provided assistance to lab technicians conducting experimental surgery on animals: induced anesthesia, observed EKG readings, inserted medical implants/drugs, and conducted anesthesia recovery

SKILLS & INTERESTS

- **Awards:** USA Computing Olympiad Gold Division 2019, National Merit Scholarship Winner 2019
- **Languages:** Python, Swift, Java, JavaScript, Scheme, R, HTML, CSS, LaTeX, SQL
- **Frameworks/Technologies:** Google Cloud Platform, TensorFlow/Keras, React JS, Node JS, Express, Firebase
- **Interests:** Traveling, learning Mandarin, politics, chess, Go, basketball, running, biking, anime, lofi, martial arts