

# PATRICK YIN

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## EDUCATION

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**University of California, Berkeley** — B.A. Computer Science

August 2019 - Present

- 4.0 GPA (All Classes Taken for Letter Grade)
- Regents' and Chancellor's Scholar — Merit-based scholarship for the top 2% of undergraduates at UC Berkeley
- Relevant Coursework: Machine Learning, Artificial Intelligence, Convex Optimization, Computer Architecture, Data Structures, Discrete Math and Probability, Linear Algebra, Multivariable Calculus
- Current Coursework: Deep Learning, Probability and Random Processes, Algorithms

## EXPERIENCE

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**Berkeley AI Research** — Research Assistant

Jul 2020 - Present

- Working under Prof. Sergey Levine and Justin Fu on applying reinforcement learning to autonomous driving
- Developed a Hierarchical Conservative Q-Learning Model over a Deep Imitative Model for self-driving in CARLA
- Implemented a Residual CNN imitation learning pipeline and applied transfer learning techniques for Real2Sim between Berkeley Deep Drive and CARLA

## PROJECTS

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### Lucent

- Developing a web application that allows users to create automatable workflows for data exploration/processing
- Undergoing rapid product iteration by reaching out and pitching to employees from CROs, Gilead, and Oracle
- Tech Stack: MERN Stack, Dagster, Flask, Pandas, Plotly, TypeScript, HTML/CSS, Redux, Python

### Phyzmo

- Constructed a cross-platform application tracking moving objects and creating visuals based on recorded data for students in physics labs—published to Apple Store
- Tech Stack: GCP Vision API, GCP Cloud Functions, GCP Storage, OpenCV, Firebase, Python, Java, Swift

### Absent

- Launched an iOS app coaching non-native speakers to improve their accent by analyzing their accent through voice recordings and providing feedback using word-level confidence analysis
- Tech Stack: GCP Speech-to-Text API, GCP Cloud Functions, GCP Storage, Firebase, Python, Swift

### MLTube

- Produced a web application which predicts the virality of YouTube videos by creating a CNN for NSFW classification of the thumbnail, a CNN for clickbait regression of the title, and a live web scraper for trendy tags
- Tech Stack: Tensorflow/Keras, Flask, Selenium, HTML/CSS, Javascript, Python, Heroku App Deployment

### FeeSplitter

- Invented a web application tracking shared expenses and balances between roommates, friends, and family
- Tech Stack: Javascript (Node.JS, Express.JS, React.JS), HerokuApp Deployment, HTML, CSS, SQL

## SKILLS AND INTERESTS

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### Awards

Outstanding CS61A Project Award (2020), USA Computing Olympiad Gold Division (2019), National Merit Scholar (2019)

### Languages

Python, C, Java, JavaScript/TypeScript, Swift, HTML/CSS, Scheme, LaTeX, SQL

### Frameworks/Tools

PyTorch, MERN Stack, Redux, Dagster, NumPy, Tensorflow, GCP, Firebase, Git

### Interests

playing guitar, chess, basketball, running, lofi, stock trading, product development