Ethan Pang

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EDUCATION

University of California, Berkeley **June 2020 – May 2024**

B.A. Computer Science | GPA: 3.8/4.0 | CAA Leadership Award Recipient | Upsilon Pi Epsilon (CS Honor Society)

Relevant Coursework: Data Structures and Algorithms/Efficient Algorithms/Artificial Intelligence/Machine Learning/Principles of Data Science/Computer Systems/Architecture/Operating Systems/Computer Security/Linear Algebra/Multivariable Calculus

SKILLS

- **Languages:** Java, Python, C, C++, HTML, CSS, JavaScript, TypeScript, Swift, SQL, RISC-V
- **Web Technologies:** React.js, Next.js, Node.js, MongoDB, Express.js, Firebase, Chakra.ui, Bootstrap
- **Data Science:** Data engineering, data pipelines, data analysis, data modeling, data inference, data visualization
- **Machine Learning:** PyTorch, scikit-learn, ML workflow, numpy, pandas, neural networks, CNNs, classification, regression
- **Other:** Object Oriented Design, REST API, Agile, Jira, AWS, ROS, Android, IOS, Linux, git, Jupyter Notebook, Arduino, Carla

WORK EXPERIENCE

Software Engineering Intern - Dinamic Pricing **June 2022 - August 2022**

- Built a fullstack website using React, Chakra UI for frontend and Express, Node, MongoDB for backend
- Integrated user payment and login functionality with the Etsy API

Research Assistant - Model Predictive Control Lab, UC Berkeley **June 2022 - Present**

- Controlled autonomous vehicles with the Robot Operating System (ROS) and integrated with the Carla API
- Visualized simulated vehicles in a 3D Carla environment built on a MathWorks Roadrunner map
- Tested the control algorithm with a physical vehicle by reenacting the simulation in a real world testing site

Frontend Developer - Web Development at Berkeley **September 2021 - Present**

- Developed websites for industry clients using React.js and Next.js frameworks, Chakra.ui styling library, and HTML/CSS while practicing agile development methodologies within a project team
- Developed content, gave lectures and mentored in the club's fullstack development course serving 200 students per semester

Course Tutor: CS61B - UC Berkeley **June 2022 - August 2022**

- Taught as course staff for UC Berkeley's core data structures course, CS61B
- Prepared and presented supplementary mini-lectures to students to reinforce concepts and guided students through practice questions to solidify understanding of material
- Answered student questions about assignments, and provided real time debugging help with projects

Data Engineering Project Manager - Public Editor **September 2021 - May 2022**

- Analyzed user performance with a moving-average algorithm to allow the platform to score users' credibility
- Built data processing pipeline with pandas and stored user info in AWS MySQL database

Course Tutor: CS61B - UC Berkeley **June 2021 - August 2021**

PROJECTS & LEADERSHIP

AFX Tech Website - Project Manager **January 2021 - May 2022**

- Lead the History team in maintaining and improving the website for UC Berkeley's largest dance organization, AFX Dance
- Built with React, TypeScript, Bootstrap and the Airtable API while teaching new members and keeping the team on track to meet its goals and the requests of AFX board members

Git Version Control Clone **February 2021 - April 2021**

- Implemented a git emulation using Java with functional commands: commit, checkout, merge, push, pull, etc.
- Allowed creation, deletion and modification of actual files on the computer via the command line interface

Web Development - Tabulate Website **January 2021 - May 2021**

- Built a modular and responsive user dashboard with React for the frontend and a Google Firebase backend

FIRST Tech Challenge Robotics - Co-Captain **August 2016 - June 2020**

- Set the team's direction as Co-Captain by managing cross-functional team collaboration and directing subteam goals; resolved conflicts and encouraged teamwork, resulting in advancement to World Championships three years in a row
- Facilitated communication with our community, including sponsors, industry professionals, other robotics teams and organizations serving underrepresented students, to which I lead STEM education outreach efforts
- Controlled the robot with Java and Android Studio to perform autonomously through sensor readings, computer vision, and mathematical algorithms and to respond to human input via a physical gaming controller

Mobile App Development **August 2016 - June 2020**

- Android: Robotics competition scoring app; Arduino interfacing app built for the Synopsys Science Fair
- IOS: iPad speech therapy game; app to simulate sounds in a 3D environment with a gyroscope sensor

AWARDS/HONORS

- California Alumni Association Leadership Award
- Upsilon Pi Epsilon: Nu Chapter (CS Honor Society)
- Chinese Student Association Officer: Webmaster