Dixun Cui

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EDUCATION

University of California, Berkeley — Expected Graduation: May 2022
B.S. Mechanical Engineering — GPA: 3.94
Minor: Electrical Engineering and Computer Sciences
Societies: Tau Beta Pi
Relevant Coursework: Multivariable Calculus, Visualization for Design, 3D Modeling for Design, Physics for Engineers, Designing Information Devices and Systems, Intro to Computer Programming, Data Structures (IP), Linear Algebra and Differential Equations (IP), Solid Mechanics (IP), Intro to Product Management (IP)

PROJECT EXPERIENCE

Frame Team Lead — Sep 2018 - Present
Berkeley Human Powered Vehicle

- Leading a team of six engineers to build the frame of a bicycle for the World Human Power Speed Challenge
- Oversaw custom frame assembly by ordering parts and coordinating part machining
- Engineered a 28% reduction in frontal frame deflection using Solidworks 3D Design and simulation tools

Braking Engineer — Feb 2019 - Present
Berkeley Hyperloop

- Designing and manufacturing a failsafe braking system for a levitation pod capable of traveling over 250 mph
- Spearheading research and prototyping of a regenerative braking system for optimizing pod efficiency

Wind Turbine Design and Assembly — May 2019
3D Modeling for Design Course

- 3D printed a mini ABS plastic turbine with a power efficiency 60% of the full-sized industry average
- Developed part drawings and study summaries to communicate design decisions and experimental results

WORK EXPERIENCE

Undergraduate Researcher — Jun 2019 - Present
Kosa Goucher-Lambert Lab

- Investigating the effect of varying computational agent stimuli on design problem solving
- Facilitating data collection by individually building a material design problem GUI in Matlab
- Increasing user study engagement through unconventional problem formulation

Academic Student Employee — Aug 2019 - Present
UC Berkeley Electrical Engineering and Computer Sciences Department

- Assisting students in applying linear algebra and circuit design concepts to build devices
- Teaching usage of Python NumPy library for data processing and analysis
- Facilitating course efficiency through the troubleshooting, maintenance and setup of lab equipment

SKILLS

Hardware: 3D Printing, Laser Cutting, Machine Shop (Mills, Lathes, Drills), Tormach/Shopbot CNC Machining, Rapid Prototyping, Soldering, Woodworking
Software: Solidworks, Fusion 360 CAM, AutoCAD, Matlab, Python, Java, CURA, Microsoft Office, Illustrator
Languages: English (fluent), Mandarin (speaking), French (intermediate)