Matthew Zhang

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EDUCATION

University of Illinois at Urbana-Champaign 4.00 GPA *Expected Graduation 05/2024*
Bachelor of Science in Mechanical Engineering

WORK EXPERIENCE AND VOLUNTEERING

Electrifai Software Engineering Intern *06/2021 – 08/2021*

- Improved machine learning models through data labelling and quality checking model output
- Met regularly with managers and communicated findings, results, and project status

Summer Robotics Course Instructor *06/2021 - 07/2021*

- Developed a curriculum and kit focused on utilizing an Arduino microcontroller for robotics applications
- Taught and mentored a group of 12 students, recieved positive course evaluations and feedback

ACTIVITIES

iRobotics – *Mechanical Lead* *09/2020 - Present*

- Designing a 30lb combat robot in SolidWorks to compete at a university competition
- Leading mechanical design and CAD training sessions and design reviews to develop member skills and improve designs

Illini Solar Car – *Facilities and Safety Director* *09/2020 - Present*

- Engineering an efficient solar-powered car from scratch to compete in long-distance races
- Collaborating and communicating with a small team to develop dynamic wheel doors to improve car aerodynamics and efficiency while being easily removeable for quick maintenance

FIRST Tech Challenge Robotics Competition – *Team Leader* *08/2015 - 05/2020*

- Computer-modeled, manufactured, and programmed a robot for a yearly robotics competition
- Coordinated and led SolidWorks design, custom CNC manufacturing, and programming efforts as team leader. Held position throughout 5 years of team's history
- Ranked first in our division at 2020 Maryland state competition and quailfied for world competition

PERSONAL PROJECTS

Quadruped Robot Dog *06/2021 - Present*

- Designing, constructing, and programming a four legged "robot dog" from scratch
- Utilizing inverse and four-bar linkage kinematics for accurate positioning of limbs
- Creating components in SolidWorks and assembling the robot from 3D printed parts and commercial hardware

SKILLS

Computer Aided Design: Certified SolidWorks Professional (CSWP); Comfortable with Creo, Autodesk Inventor, Fusion360; Learning Siemens NX
Programming: Proficient with Java, MATLAB; Comfortable with C#, C, Python, HTML/CSS
Other Software: Proficient with Microsoft Office, PrusaSlicer, GrabCAD; Comfortable with aPriori, Git
Experience: Rapid prototyping mechanical components using 3D printing and laser cutting, design for manufacture of injection molded, sheet metal, and 3D printed parts, CAM and CNC programming and operation, soldering and electronics, ANSI engineering drawings and GD&T standards