Matthew Zhang

3135 Rhode Valley Trail, Ellicott City, MD 21042 | 443-538-7470 | mjzhang4@illinois.edu

EDUCATION

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

WORK EXPERIENCE AND VOLUNTEERING

FIRST Tech Challenge Robotics Mentoring   *2020-Present*
- Leading training sessions for a group of 8 on robotics skills such as Fusion360 CAD
- Advising robot design decisions and providing expertise throughout the season

LEGO Robotics Tutoring   *2020 Summer*
- Taught an elementary schooler programming using the LEGO MINDSTORMS platform

Johns Hopkins Applied Physics Laboratory Intern   *2018-2019*
- Developed Hololens augmented reality visualization for paratrooper motion capture data to analyze stresses on paratrooper bodies during landing
- Created visualization using Unity3D, C#, and MATLAB scripts

ACTIVITIES

Combat Robotics Team: "Parts and Wreck"   *2020-Present*
- Designing a 30lb combat robot in Solidworks to compete at a competition held by iRobotics
- Leading the chassis design sub-team consisting of 4 members to brainstorm, CAD, and manufacture a robot drive base

Illini Solar Car   *2020-Present*
- Designing a solar-powered car to compete in long-distance endurance races
- Aiding mechanical sub-team in ideation, prototyping, CAD in PTC Creo, and implementation of various projects such as dynamic fairing doors

Science Olympiad   *2016-2020*
- Competed in science-related events such as Circuit Lab, Hovercraft, and Wind Power
- Achieved 1st in Mission Possible, Write it Do it, and Boomilever events, 2nd in Circuit Lab at 2019 Maryland state competition
- Learned microcontroller programming, soldering, 3D printing, and hand tool skills

FIRST Tech Challenge Robotics Competition   *2015-2020*
- Modeled, manufactured, and programmed a robot for a yearly robotics competition
- Coordinated and led Solidworks CAD design, custom CNC manufacturing, and programming efforts as leader of team 9866 from 2015-2020
- Qualified for world competition as the 2020 Maryland State Finalist

SKILLS

Computer Aided Design: Certified Solidworks Professional (CSWP), Creo/ProE, Autodesk Inventor, Fusion360
Programming: Java, C, C#, MATLAB, HTML/CSS
Other Software: aPriori, Git, GrabCAD, Android Studio, Eclipse, Visual Studio, Microsoft Office
Experience: Robotics, 3D printing, ANSI engineering drawing creation, design for manufacture, CAM/CNC machining, soldering, microcontroller programming