Matthew Zhang

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EDUCATION

University of Illinois at Urbana-Champaign 4.00 GPA   *Expected Graduation 05/24*
Bachelor of Science in Mechanical Engineering

WORK EXPERIENCE AND VOLUNTEERING

FIRST Tech Challenge Robotics Mentoring   *08/20 - Present*
- Leading training sessions for a group of 8 on Fusion360 CAD and Java programming
- Advising robot design decisions and providing expertise throughout the season

LEGO Robotics Tutoring   *06/20 - 08/20*
- Taught robotics programming skills to an elementary schooler

Johns Hopkins Applied Physics Laboratory Intern   *06/18 - 08/18*
- Developed HoloLens augmented reality visualization for paratrooper motion capture data to analyze stresses on paratrooper bodies during landing
- Programmed visualization using Unity3D, C#, and MATLAB scripts to display a moving paratrooper in augmented reality on the Microsoft HoloLens

ACTIVITIES

Combat Robotics Team: "Parts and Wreck"   *09/20 - 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   *09/20 - Present*
- Designing a solar-powered car to compete in long-distance endurance races
- Communicating and working with a small team to develop dynamic wheel doors to improve car aerodynamics and efficiency

Science Olympiad   *08/16 - 05/20*
- Competed in various science related events and 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   *08/15 - 05/20*
- 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, Microsoft Office, GrabCAD , Git, Android Studio, Eclipse, Visual Studio,
Experience: Mechanical Design, Robotics, 3D Printing, Rapid Prototyping, ANSI Engineering Drawing Creation, Design For Manufacture, CAM/CNC Machining, Soldering, Microcontroller Programming, Sheet Metal