Steven Kuo

stevenkuo711@gmail.com | 443-640-8669 | Github: github.com/stevenkuo711/portfolio

EDUCATION

University of Maryland, College Park **GPA: 4.0**
B.S. Mechanical Engineering Expected **May 2026**
Minor: Robotics and Autonomous Systems
University Honors

SKILLS

CAD: SolidWorks, Autodesk Inventor, Siemens NX & NASTRAN, Fusion 360
Engineering: FDM 3D Printing, Waterjet, Machining, FEA, Soldering, GD&T
Programming: Java, C++, MATLAB

EXPERIENCE

Terrapin Works **College Park, MD**
Technician, Instructional Fabrication Lab **February 2023 - Present**

- Instructed other students and provided assistance on operating the lab's machines
- Provided subtractive manufacturing services to fabricate custom orders
- Undergoing training and learning how to CAM for the CNC mill with **Fusion 360**

UMD Loop **College Park, MD**
University Rover Competition - Arm Subteam Member **February 2023 - Present**

- Developed arm structure in **SolidWorks** while incorporating feedback from leadership
- Prepared BOM and assisted with organizing the ordering of custom and COTS parts

Not-A-Boring Competition - Tunnel Support Member **September 2022 - January 2023**

- Drafted engineering drawings in **SolidWorks** to obtain quotes from manufacturers
- Utilized FEA in **NX** to determine structural integrity of assemblies and optimize designs
- Completed hand calculations and bolt-level analysis to justify and improve designs

Leatherbacks Combat Robotics **College Park, MD**
1 lb, 12 lb, 30 lb Team - Member **September 2022 - Present**

- Designed parts in **SolidWorks** for robots in the 1 lb, 12 lb and 30 lb weight classes
- Manufactured parts for the 30 lb and 1 lb robot by operating the waterjet and drill mill
- Soldered all the necessary electronic components for an operational 1 lb robot

Dulaney FIRST Robotics Competition **Timonium, MD**
Team President **September 2018 - May 2022**

- Instructed new members how to fabricate parts with metalworking tools and 3D printers
- Managed a team of 20 members to design the first iteration of the robot in two weeks using **Autodesk Inventor**, translating to the final 125 lb robot by the sixth week
- Supervised programming subteam to help with debugging in **Java** as well as incorporating encoders and PID control loops for precise motor control
- Raised $5,000 via sponsorship outreach and presentations to fund the season's operations

Dulaney VEX Robotics Competition **Timonium, MD**
Club Secretary, Team Co-Captain **September 2018 - May 2022**

- Mentored teams within our organization to guide troubleshooting and testing designs
- Collaborated in a team of 5 to design, build, and test a 18" x 18" x 18" robot
- Programmed with potentiometers and encoders in **C++** to craft autonomous routines