

Kyle Downer

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EDUCATION

University of Maryland, College Park | Cumulative GPA 3.2 College Park, MD
Bachelor of Science (B.S.): Mechanical Engineering May 2024

TECHNICAL & RESEARCH EXPERIENCE

Terps Racing - Baja Team September 2022 - Present

Group Project

- Design and model jigs within SolidWorks for manufacturing and welding of various control arms
- Improve on existing jig design by incorporating lessons learned and feedback from prior designs
- Construct jigs with exact specification to ensure control arms can be made with identical dimensions
- Collaborate with members of other sub teams to create parts that fit within dimensions of larger race car

Mechanical Contractors Association of Metropolitan Washington July 2022 - Present

Group Project

- Collaborated with a team of six mechanical engineering students to develop a full-scale bid proposal for a real-life mechanical project
- Developed peer relationships with mechanical engineering students through participation in the National MCAA Student Chapter Competition and accompanying events
- Gain insight into industry project management/estimating practices
- Incorporate the following into project management plan: project schedule milestones, manpower curve and estimates, material and equipment estimates, take-offs, cost control, and value engineering

ENES220 – Mechanics II March 2022

Group Project

- Utilized engineering principles to design and construct a wooden beam to withstand a concentrated load within a tolerance range
- Used MATLAB and spreadsheets to calculate and optimize the design within assigned constraints
- Designed wooden beam within SolidWorks and utilized stress analysis to confirm shear calculations

ENME272 – Computer-Aided Design October 2021

Group Project

- Developed and designed electrical scooter composed of over 30 parts within 3D design program SolidWorks
- Utilized SolidWorks Finite Element Analysis (FEA) in conjunction with Thermal Analysis to ensure materials chosen could withstand typical loads.

WORK EXPERIENCE

Team Leader, College Success Scholars April 2022-Present

University of Maryland, College Park, MD

- Mentor new recruits through their first and second years of college providing academic, emotional, and extra-curricular support
- Collaborate with program director to schedule weekly seminar and activities
- Selective club dedicated to empowering young minority males through academic excellence and professional development
- Engage in dialogues, readings, and activities pertaining to leadership, time management, racial identity, and various other issues facing young adults in higher education

ACTIVITIES

Secretary, Mechanical Contractors Association Metropolitan Washington July 2022-Present

University of Maryland, College Park, MD

Suspension Sub Team Member, Terps Racing April 2022-Present

University of Maryland, College Park, MD

Member, College Success Scholars Program July 2020-Present

University of Maryland, College Park, MD

TECHNICAL SKILLS

SolidWorks, C++, Fusion360, MATLAB, MS Office, Computer desktop design and assembly, Built and programmed robots for competition