**Joshua Bellon**

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**EDUCATION**

**Lehigh University** ­­–– Bethlehem, PA Expected Graduation: May 2023

Bachelor of Science in Mechanical Engineering

Minor in Computer Science

**ENGINEERING PROJECTS**

**Self-Balancing Motorcycle** –– Bethlehem, PA August 2022 – December 2022

*Mechatronics Lab*

* Worked in a 2-person group to design and build a small functional Arduino motorcycle that utilizes an inertia wheel to balance itself
* Programmed a PID controller in MATLAB to accept readings from the sensors, apply gains, and uses this data to create a feedback loop that allows the motorcycle to balance itself
* Analyzed and tuned the values of the gains and angle bias for the controller to improve how quickly the motorcycle balances itself

**PROFESSIONAL EXPERIENCE**

**Device for Brain Injury Studies STEM-SI Internship** –– Bethlehem, PA June 2021 – Present

*Dr. Neal Simon Lab*

* Model, tabulate and graph the linear and rotational forces on rats following head impact
* Configuring a momentum exchange device to consistently and accurately relay the forces imposed on the rats from impact
* Design and prototype protective head gear for the rats that augments the precision of the momentum exchange device
* Placed 2nd in STEM-SI Research Day where students present the results of research and design over the course of the summer

**Advanced Auto Parts** –– Marlton, NJ June 2020 – August 2020

*Salesperson*

* Advised customers on the products most suited towards their needs
* Manned the cash register, answered phone lines, and delivered online orders from the store website that accounted for about 10% of store sales
* Changed car batteries and tested starters and alternators for customers so they could determine the next course of action for their vehicle

**Community Service Office** –– Bethlehem, PA August 2019 – March 2020

*Grade School Teaching Assistant*

* Pacified and coordinated classes accommodating 20+ students on a daily basis using interpersonal skills
* Individually tutored and guided struggling students through their coursework by explaining concepts in an easy-to-follow manner

**SKILLS AND ACHIEVEMENTS**

* Competent in Microsoft Word, Microsoft Excel, Java, MATLAB, LabVIEW, SolidWorks, and Arduino
* 2019 & 2020 Honor’s Society Inductee
* Varsity Bow Seat on Lehigh Men’s Rowing Team 2020-2023Bottom of Form