Jonah Offman

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EDUCATION

Johns Hopkins University, Whiting School of Engineering — Baltimore, MD
Bachelor of Science in Mechanical Engineering, Minor in French — Expected May 2021
GPA: 3.82
Honors and Awards: Pi Tau Sigma Mechanical Engineering Honor Society, Charles C. Diggs Scholarship Recipient, Dean's List (Fall 2017 - Spring 2019), 2020 CoSIDA Academic All-District Team, Centennial Conference Academic Honor Roll (2019 - 2020)

WORK EXPERIENCE

Johns Hopkins Center for Neuroplastic Surgery Research — Baltimore, MD
Design Engineer — August 2020 - Present

- Member of the senior design team responsible for the design and implementation of test methods for a novel hollow cranial implant used for drug delivery in glioblastoma (GBM) patients
- Using Arduino and attached sensors for data acquisition and measurement, CAD software for structural design and planning, and researching published testing standards through outlets such as ASTM in order to help the implant receive FDA approval

Department of Mechanical Engineering, Johns Hopkins University — Baltimore, MD
Undergraduate Teaching Assistant — October 2020 - Present

- Teaching assistant for the Fall 2020 Manufacturing Engineering course
- Responsible for all homework and quiz grading, as well as data entry and management of Blackboard system

Matri Design — Remote
Summer Intern — June 2020 – September 2020

- Created hierarchal glyph-based 3D data visualizations using the ANTz software, based on Vera Institute of Justice datasets
- Used Python and Anaconda packages system to clean and process data in order to produce parent-child node glyph structures

International Analytics Group — Remote
Project Developer — June 2020 – August 2020

- Developed baseball statistic-based math problems for a nationwide math tournament in Mexico
- Created over 50 written pages of content to educate students on baseball's history and impact on the country of Mexico

Hopkins Extreme Materials Institute, Johns Hopkins University — Baltimore, MD
Research Intern — May 2019 - February 2020

- Performed Pressure Shear Plate Impact and Split-Hopkinson bar experiments and processed data in MATLAB
- Manufactured boron carbide specimens using EDM, lapping, and polishing techniques
- Participated in the HEMI Summer Intern Research Symposium with a poster entitled *High Strain Rate Multi-Axial Loading Behavior of Granular Boron Carbide*

Center for Student Success, Johns Hopkins University — Baltimore, MD
Calculus Tutor — September 2018 – April 2019

- Clarified and reviewed Calculus I and II concepts with students by working through practice problems
- Helped students develop effective study, note taking, and test taking habits

Spire Philanthropy — Toronto, ON
Summer Intern — May 2018 – August 2018

- Focused on client outreach and developing new charity-business marketing partnerships
- Conducted market research to identify and connect charities with companies possessing similar target markets

EXTRACURRICULAR EXPERIENCES

Johns Hopkins Blue Jays Varsity Baseball
Right-Handed Pitcher — September 2017 - Present

- Named team captain prior to 2020-2021 season
- Travelled to Cedar Rapids, IA to pitch in the 2019 DIII College World Series, placing 3rd in the country
- Have developed soft skills such as leadership, time management, responsibility, accountability, and the ability to thrive under pressure as a student-athlete

Sports Analytics Club
Team Member February 2020 - Present

- Member of Pytch Design and FldrOp projects, with support from Dr. Anton Dahbura and Baltimore Orioles representatives
- Helping to develop Python packages to determine outfielder range and optimal off-speed pitch characteristics depending on factors such as spin rate, spin axis, release height, and movement profile

AstroJays Rocketry Team
Propulsion System Specialist September 2018 – June 2019

- Contributed to the design and CAD modelling of the rocket's fueling station and oxidizer plumbing system
- Learned engineering standards and principles of design through hands-on experience

SKILLS

- Fluent in French
- Skilled in CAD (experience in CREO and SolidWorks)
- Experience with engineering software such as ANSYS, LabView, and CNC
- Manufacturing and machining processes (3D Printing, Laser Cutting, Wire EDM, Lathe, Mill, etc.)
- Proficient in MATLAB and Python
- Excellent with Microsoft Office and G suite

COURSEWORK

- ***Engineering:*** Mechanics I & II, Dynamics, Statics, Mechanics Based Design, Fluid Mechanics, Thermodynamics, Materials Selection, Heat Transfer, Electronics and Instrumentation, Manufacturing Engineering, Dynamical Systems, Heat Transfer, Robotic Sensors and Actuators
- ***Coding:*** MechE Computing (MATLAB), Scientific Programming in Python, Business Analytics (Excel)
- ***Other:*** Introduction to Computer-Aided Design, Calculus I-III, Linear Algebra, Differential Equations, Probability / Statistics