Jacob Gobbo

(909) 203-8819, jgobbo@berkeley.edu

EDUCATION

Carnegie Mellon University, Pittsburgh, PA **May 2020**
Bachelor of Science in Mechanical Engineering
Additional Major in Physics
Overall GPA 4.0/4.0

RESEARCH EXPERIENCE

Physics Department Research, Carnegie Mellon University **Oct 2018 - present**

- Exfoliating two dimensional materials such as graphene, hexagonal boron nitride, and tungsten ditelluride
- Stacking exfoliated flakes into heterostructures with novel magnetic properties
- Etching graphite into hall bars to allow for electrical contact with air-sensitive materials
- Designing quantum devices and performing electron-beam lithography to create sub-micron features
- Using electron-beam evaporation to add electrical leads onto written devices

NASA Summer Internship, Carnegie Mellon University **June - Aug 2019**

- Assembled a frame to hold and smoothly transport a cryostat for sample loading
- Machined custom parts for multiple projects
- Programmed LabVIEW interfaces to control instrumentation with minimal effort from users
- Built a compact plumbing system to withstand over 360 degrees of rotation
- Calibrated multiple PID controllers
- Modified an existing system to incorporate precise, automated stage rotation

RELEVANT COURSEWORK

General Relativity	Adv. Quantum Mechanics I	Intmd. Electromagnetism I & II
Physical Mechanics I	Electronics	Thermal Physics

WORK EXPERIENCE

Undergraduate Teaching Assistant, Carnegie Mellon, Numerical Methods **Jan - May 2019**

- Held office hours and responded to questions online to help students with homework sets and studying for exams

LEADERSHIP

Treasurer, Carnegie Mellon Men's Water Polo Team **Sept 2017 - May 2018**

- Managed tournament expenses and miscellaneous expenses to allow the team to run smoothly
- Created a budget for the following season based on past expenses

SKILLS

Nanofabrication: Electron-beam Lithography, Reactive Ion Etching, Electron-beam Evaporation
Software: Microsoft Office, Solidworks, DesignCAD
Machining: Lathe, Mill, Laser Cutter, 3D Printer
Programming: MATLAB, LabVIEW, C, Python