ETHAN C. DONLON

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EDUCATION

University of Pennsylvania, Philadelphia, PA.....September 2019 – May 2022
Master's in Mechanical Engineering, Concentration in Mechatronics, **GPA**: 3.8
Haverford College, Haverford, PA .....September 2017 – May 2021
Bachelor of Science in Physics with High Honors, Minor in German, *magna cum laude*, **GPA**: 3.94
Study Abroad, Berlin Germany ..... June 2019 – August 2019
Humboldt University; German Business (B2) Proficient

TECHNICAL SKILLS

Computer Programs and Software: Solidworks, MatLab, Python, OpenCV, Java, JavaScript/HTML/CSS, C++, Microsoft Excel including VBA, Mathematica, LabView, FEA with ANSYS, CETOL 6σ
Instrumentation: Universal Testing Machine, Kelvin Probe Force Microscopy, Oscilloscope and Basic Power Tools

ENGINEERING EXPERIENCE

DOVE Opioid Device, *Altrumed, Startup at the University of Pennsylvania* ..... January 2021 – Current
- Developing only wearable opioid harm prevention device, capable of both sensing and reversing an overdose by auto injecting lifesaving naloxone
- Designed the electromechanical system, including PCB design and verification, CAD, and embedded software, to sense blood oxygen levels non-invasively from the shoulder
- Preparing novel medical device for FDA clearance pathways and clinical studies to bring device to market
- Team awarded Coulter Grant for promising innovation in health care to meet underserved clinical needs

Mechanical Engineer Intern, *DEKA Research and Development* ..... June 2021 – August 2021
- Completed design changes using free body force analyses and tolerance analyses on integral parts of Class III medical device to ensure safety and aid assembly, resulting in projected $100,000 annual savings
- Created test fixtures and aided test engineers in finding design limits to validate new parts
- Produced complex three-dimensional statistical tolerance analyses via CETOL

Manufacturing Engineer Intern, *DEKA Research and Development* ..... June 2020 – August 2020
- Collaborated with team to conceive design changes, assemble, streamline production, and develop operating procedures for biomedical devices
- Designed and implemented assembly fixtures using Solidworks to manufacture biomedical devices on large scale and communicated with mechanics to assure manufacturable designs
- Conducted force analysis on four body linkages to determine maximum allowable stress on safety mechanism

Senior Research, *Haverford College* .....September 2020 – May 2021
- Adapted an Atomic Force Microscope to conduct Kelvin Probe Force Microscopy on self-assembling porphyrin nano circuits
- Investigated the effects of oxygen adsorption on organic nanowires and the possibility of Schottky Barriers

RELEVANT COLLEGE COURSES

Mechatronics, *University of Pennsylvania*
- Developed practical circuitry and software skills by creating and debugging mechatronic systems

Design for Manufacturability, *University of Pennsylvania*
- Learned to produce highly manufacturable products while learning engineering communication skills

Engineering Entrepreneurship, *University of Pennsylvania*
- Honed leadership skills while learning techniques to execute visions and seize opportunity

AWARDS

College: *Ambler Award Nominee*; Awarded to 15 graduating student athletes with highest GPA, *Academic All-District Team*; Awarded to senior athletes in Philadelphia area, *Phi Beta Kappa Society;* Awarded nationally to top 10% of students
Athletic: USILA National Team of the Week (4/9/19 & 4/23/19); Russel Martin Award (Hockey player who exemplifies hard work, team play and leadership); USA Lacrosse Academic All-American

LEADERSHIP EXPERIENCE AND INTERESTS

Lacrosse Captain, *Haverford College* – Haverford, PA ..... May 2020 – May 2021
Interests: Backpacking, Bagpipes, Entrepreneurship, Ice Hockey, Physics, Skiing, Woodworking