

Benjamin Hsu

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EDUCATION

Vanderbilt University

May 2020

Candidate for BE in Biomedical and Electrical Engineering

Nashville, TN

- **Cumulative GPA:** 3.076/4.0 | **Major GPA:** 3.505/4.0 (Dean's List)
- **Relevant Coursework:**
 - Optoelectronics, Electromagnetics, Circuits, Systems & Signals Processing, Digital Logic
- **Societies**
 - Biomedical Engineers Society, Vanderbilt Trap and Skeet Shooting team, Vanderbilt Commodore Orchestra, Vanderbilt Students Volunteering for Science

WORK EXPERIENCE

Vanderbilt Aerospace Design Laboratory

Aug. 2019 - Present

Team Member – AI Division

Nashville, TN

- Member of 6x national champion rocketry team which competes in the NASA Student Launch competition annually.
- Assisted with design and refinement of an UAV-mounted in-air sampling tool to simulate collection of specimens in a hazardous environment.
- Research and design innovative docking/charging station for post-landing refueling of UAV.

Diagnostic Imaging and Image-Guided Interventions Laboratory

Aug. 2018 - Present

Undergraduate Research Assistant

Nashville, TN

- Modelled optical components with Solidworks to create new iteration of handheld optical housing that was 35% more compact than before.
- Developed algorithm to reduce processing time of Optical Coherence Tomography (OCT) imaging, which eliminates need for pauses during OCT-assisted surgery so that surgeons could track their tools in near real time.

CollegeVine

Oct. 2016 - Present

Tutor, Content Developer, Consultant

Nashville, TN

- Coached 35+ domestic and international students on the structure and intricacies of the SAT to promote success on the test, with an average score increase of 200 points.
- Develop practice test curriculum and reworked the tutoring system in 2017 to its current iteration.
- Interviewed 30+ college students on their experiences with the SAT to develop our focus and guidelines.

LEADERSHIP

Vanderbilt Commodore Orchestra

Aug. 2017- Aug. 2019

Personnel Manager, Vice President

- Served as primary contact source for 80+ faculty, students, and community members.
- Worked with 8 other board members to direct 3 audition periods each semester, managed listserv, and recorded attendance.
- Created bimonthly social events to encourage teamwork and collaboration within the orchestra.

SKILLS

- **Programming Languages:** MATLAB, Python, Java
- **Software Programs:** LABview, Solidworks, Geomagic Design X, LTSpice, LaTeX, Microsoft Office
- **Other:** Soldering, Drone construction, ELISA, PCR, Micro pipetting