William G. Guiracoche

EDUCATION

Princeton University   **Class of 2017**
Mechanical and Aerospace Engineering – Bachelor of Science in Engineering B.S.E   *June 2017*
Robotics and Intelligent Systems – Certificate Program

PROFESSIONAL & RESEARCH EXPERIENCE

Theoretica Applied Physics   **Princeton, NJ**
Development Engineer and Business Operations   *October 2017 – Present*

- Primary technical development engineer for 3D-audio company; Calibrate microphones with Bidule, Matlab and Wolfram Alpha software; Use technical knowledge to design new assembly procedures and testing, to enhance microphone quality.
- Responsible and accountable for the daily business operations; Refine services operations and business processes; Manage inventory, supply and suppliers; Manage company activities; Ensure product quality assurance and prompt deliveries to meet client expectations
- Maintain effective relationships with domestic and international suppliers and customers; Negotiate and coordinate effectively with international suppliers; Facilitate domestic and international customers with sales and invoice support.

Senior Thesis: Design of a closed-Loop Feedback System for Testing and Prototyping New Deformable Mirror Technologies
Project Advisor: Professor N Jeremy Kasdin   *September 2016 – May 2017*

High Contrast Imaging Laboratory - Research at Princeton University   **Princeton, NJ**
Undergraduate Research Assistant for Professor: N Jeremy Kasdin   *June 2016 – May 2017*

- Worked intensively with I2C protocol and LabVIEW to improve controllability of deformable mirror surface
- Assisted with the design, assembly and testing of a ferrofluid deformable mirror prototype
- Replicated mirror electronics from component level to provide recommendations for redesign efforts

Thermodynamics and Integrated Science Laboratory - Research at Princeton University   **Princeton, NJ**
Undergraduate Research Assistant for Professor: Daniel Steingart   *July 2015 – September 2015*

- Programmed in Python and C to interact with lab experiments through online python server
- Created circuit boards to measure thermodynamics experiments in the Integrated Lab and current in final project
- Transposed sophomore integrated lab from Arduino to Spark Core (Particle); Created small prototype car for final lab project

EXTRACURRICULAR ACTIVITIES

Mechanical and Aerospace Engineering (MAE) Student Council - Leader   **Princeton, NJ**
President   *June 2015 – June 2017*

- Advocated for MAE student's curriculum improvements among professors to increase practical experience. After two years of engaged meetings, the MAE engineer department created a course dedicated to practical train underclassmen in electronics and 3D modeling.
- Planned, organized and coordinated with MAE professors, class-wide trips and professional events, to enhance MAE student's professional development and camaraderie; Engaged and focused on presenting MAE students' needs and interests.

American Society of Mechanical Engineers /American Institute of Aeronautics and Astronautics - Leader   **Princeton, NJ**
Princeton Chapter President - ASME / AIAA   *June 2015 – December 2016*

- Led, planed and organized on-campus activities and events for ASME/AIAA members to enhanced skills and practical experience, and to network with professional engineers outside the classroom; Promoted the ASME/AIAA membership to fellow MAE students.

Engineers without Borders (EWB) – International Community Program – Volunteer   **Princeton, NJ**
Sub Team Leader and Travel Team Member   *January 2014 – June 2016*
March 2012 – Present

- Completed a project, with a team of six EWB members, of 3.5-kilometer water supply pipeline in Northern Peruvian mountains
- Surveyed the land and assisted with hydraulic grade line calculations; Acted as the primary Spanish speaker liaison in the communication and coordination of the project between Peruvian community and the EWB team
- Led a team and presented decision making analysis to select a community that aligned with our objectives for future projects; Worked on analysis and methods to assess and compare new communities by designing a method using the House of Qualities
- Trained, coached and assisted incoming co-leader member; Worked with the Technical Team and provided hydraulic grade line calculations; Prepared technical written proposals, in Spanish and English, to submit to the EWB Organization

SKILLS AND AWARDS

Skills: Matlab, Python, Java, C, LabVIEW Simulink, Bidule and CREO; Algorithms and Data Structures; Spark Core (Particle) and Arduino; I2C Protocol; Machine Shop Experience; Microsoft Office; Fluent in Spanish

Award: The George Bienkowski Memorial Prize – for contribution to the engineering department and sound academic standing