

Vedad Bassari

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Education

University of California, Santa Barbara

Expected graduation: June 2023

Bachelor of Science in Mechanical Engineering, GPA: 4.00

Awards: Regents Scholar, Engineering Honors Program, Dean's Honors.

Work Experience

Workshop Wizard

January 2020–Present

California Nanosystems Institute (CNSI) Innovation Workshop, University of California, Santa Barbara

- Conduct maintenance and operate 3D printers, laser cutters, CNC routers, and other machines.
- Design and develop mechanisms to improve workshop tools with an emphasis on 2 laser cutters.
- Train groups of 5 users in the safe and effective operation of the aforementioned tools.
- Work closely with researchers to fabricate parts or devices that facilitate ongoing projects.

Undergraduate Research Assistant

October 2020–Present

RE Touch Lab, California Nanosystems Institute (CNSI), University of California, Santa Barbara

- Create COMSOL Multiphysics models of a novel electromagnetic actuator to examine heat transfer.
- Use the results of the simulations and relevant literature to evaluate thermal performance.

Biomedical Engineering Intern

May 2021–August 2021

Research Experience for Undergraduates (REU) in Biomedical Engineering, University of Nebraska, Lincoln

- Designed, prototyped, and manufactured a therapeutic device for fissure in ano based on prior research.
- Constructed a testing rig for preliminary characterization of the device and performance evaluation.
- Executed a literature review to examine similar biomedical devices and treatment methods.
- Delivered findings and progress through verbal presentations and written documentation.

Future Leaders in Advanced Materials (FLAM) Intern

June 2020–August 2020

Fluency Lighting Technologies Inc., Santa Barbara – Materials Research Laboratory, Santa Barbara

- Carried out thermal simulations using the Solidworks Flow Simulation Package.
- Developed 15 3D CAD models of varying complexity for a light-conversion phosphor platform.
- Utilized the simulation results to characterize the thermal properties of the phosphor converter.
- Presented the details and the results of the project under the FLAM program.

Summer Institute in Mathematics and Science (SIMS) Intern

August 2019

California Nanosystems Institute (CNSI), University of California, Santa Barbara

- Programmed a PID controller for autonomous robot movement with a graduate student mentor.
- Prepared a presentation detailing the research procedures and outcomes.

Projects

UCSB Robotics Club

September 2019–Present

University of California, Santa Barbara

- Participate in the design and fabrication of robots for the Vex U competition and club-wide projects.
- Serve as the club secretary to maintain records of activities and projects.

MATE ROV Team

January 2020–September 2020

Institute of Electrical and Electronics Engineers, University of California, Santa Barbara

- Collaborate in the design of manipulators and frame for a submersible remotely operated vehicle.

Skills

- Proficient operator of computer aided design (SolidWorks [Mechanical Design Associate], Autodesk Inventor) and engineering (COMSOL Multiphysics, Ansys Workbench, SolidWorks CFD) tools.
- Experience in MATLAB, C++, and MS Office with introductory academic exposure to deep learning.
- Working knowledge of basic microcontrollers, sensors, and actuators.
- Completed coursework in machining operations and manufacturing processes.