

# Sophomore Purdue Student

+1 xxx-xxx-xxxx | \_\_\_\_\_@purdue.edu | www.linkedin.com/in/\_\_\_\_\_

## Education

### Purdue University

Bachelor of Science, Computer Engineering (BSCMPE)

Indiana, US | Class of 2026

GPA: 3.97

### IMG Academy

Florida, US | Class of 2020

## Relevant Experience

### Summer Training, Awareness, and Readiness for Semiconductors (STARS)

Indiana, US

Design Track (Memory Calculator Team)

May 2023 – July 2023

- Prototyped memory calculator using SystemVerilog and verified design through 3 iterations of FPGA testing
- Developed testbench scripts for each Arithmetic Logic Unit (ALU), Shift Register, Read, and Write FSM modules
- Planned and adhered to objectives in 14-day project timeline, saving 20 total hours in 8-hour work days
- Synthesized design into Graphic Design System (GDS) file and optimized used space to 4.5% of area constraint

### FPGA Lunar Lander

Indiana, US

Designer

June 2023 – August 2023

- Designed a game using SystemVerilog, user operates rocket through input/outputs of a FPGA simulator
- Implemented concepts such as synchronizers, encoders, clock dividers, state machines, and BCD Arithmetic

### Modelling High Efficiency Thermophotovoltaic Systems

Indiana, US

Undergraduate Research Fellow

January 2023 – May 2023

- Assisted in collecting emitter refractive index and thickness at 25°C - 1000°C using Spectroscopic Ellipsometry
- Utilized nanoHUB S4 tool to simulate emittance flux for 3 single and 1 multilayer TPV emitter material candidates
- Evaluated normalized spectral efficiency of 4 emitter candidates with MATLAB to identify optimal material
- Presented findings at the Spring Undergraduate Research Conference to 5 judges from varying disciplines

### Engineering Projects in Community Service (EPICS) Children Educational Displays

Indiana, US

Project Manager

January 2023 – May 2023

- Oversaw assembly of all 3 sub-team's displays for delivery to the Indianapolis Children's Museum
- Restructured lab session architecture with Graduate Teaching Assistant, allocating more time for prototyping
- Led team meetings to monitor progression; pinpointing and addressing surfacing issues weekly in a team of 16

Design Team CAD Specialist (Simulated Space Travel Team)

August 2023 - December 2022

- Developed all 3D printed prototypes and simulated track/magnet/rocket dimensions using Autodesk Fusion 360
- Revised initial track design saving 2 weeks of development time and \$50 in material savings

### Computer Vision Object and Feature Detection (Python)

Indiana, US

Project Manager

October 2022

- Directed a 7-day project sprint using Excel to highlight customized and measurable goals for team project delivery
- Organized formal documentation of project motivation, overview, methods, algorithm design and references
- Coordinated initialization, implementation, and debugging of all 3 detection methods within main function

### Thermal Limitation of Direct Air Carbon Capture (DACC)

Singapore (Remote)

Researcher

August 2021 – January 2022

- Theorized synergy of Eavor Geothermal and Carbon Engineering's DACC under Dr. Lauren Tetz of UMich
- Authored "Thermal Limitation of Direct Air Carbon Capture" research proposal

### Singapore Armed Forces

Singapore

42SAR Kaffir Company Armor Infantry Section Leader

July 2020 – July 2022

- Spearheaded section assault mission exercises with newly issued Armored Fighting Vehicle: Hunter
- Participated in physical training for 4 hours/day and theoretical & practical training hours for 2 hours/day

## Additional Information

Technical skills: SystemVerilog | Python | C | Autodesk Eagle | Fusion 360 | Arduino | MATLAB | Excel

Awards: Dean's List (F22, S23) | Semester Honors (F22, S23) | SAF Certificate of Excellent Service (22)

Interests: Chip-Design | Renewable Energy Technology | Artificial Intelligence | Finance