

Ishan S. Vyas

Pepper Pike, Ohio, 44124 | (330) 888-5393 | ishan.vyas@duke.edu

EDUCATION

Duke University

Durham, NC

BSE in Electrical & Computer Engineering, Tau Beta Pi Society, **GPA 3.98/4.0**

May 2026

- **Relevant Courses:** FPGA & Digital Systems, Semiconductor Physics and Devices, Hardware Acceleration, Computer Architecture, RF Information Propagation, Signal Processing, Quantum Mechanics
- Teaching Assistant for ECE 110: Fundamentals of Electrical and Computer Engineering
- Dean's List with Distinction: Fall '23, Spring '24

Hawken School

Gates Mills, OH

National Merit Finalist, AP Scholar, Outstanding Student in Physics, Cum Laude

June 2022

PROFESSIONAL EXPERIENCE

Intel Corporation

Hillsboro, OR

TD Module Engineer Intern

May 2024 - August 2024

- Reviewed 100+ papers on advanced deposition techniques and presented recommendations to 8 engineers
- Compiled and analyzed data to approximate load size effect on wafer thickness using JMP
- Expanded tool monitoring system by integrating preventative maintenance recipes, reducing tube flaking

R.E. Warner & Associates

Westlake, OH

Substation Electrical Design Intern

May 2023 - August 2023

- Managed and led design on high voltage substation upgrades totaling \$250,000 in value
- Edited substation schematic and wiring diagrams, in line with regional and IEEE standards
- Headed design on pilot program to protect substations from high-altitude EMPs

Mercury Biomed

Cleveland, OH

Economic Development Intern

June 2022 - August 2022

- Developed financial model with a 7-year revenue projection, COGS prediction, & overhead expenses
- Completed robust patient warming industry analysis, including market size and competitor analysis

EXTRACURRICULAR INVOLVEMENT

Duke University APEX Lab

Durham, NC

Hardware Acceleration Researcher

October 2024 - Present

- Wrote C++ scripts and testbenches for verification of new systolic array RTL simulation for TPUs
- Ran verification tests for GCloud TPU using Google Cloud CLI and JAX scripts

Duke Electric Vehicles

Durham, NC

Member, Electrical Team

January 2023 - Present

- Built a blind-spot monitoring and detection device using ultrasonic sensing and C programming
- Designed circuitry for vehicle's turn signals, hazards, and brake lights

PROJECTS

Myoelectric Prosthetic Hand

- Using below CPU, created prosthetic controlled by forearm nerve impulses via surface electromyography
- Implemented sEMG signal hardware filtering and amplifying circuit and controlled PWM-based servo

Verilog MIPS CPU

- Designed and programmed 5-stage pipelined CPU with MIPS using Structural Verilog on Xilinx FPGA
- Implemented bypassing, hazard handling, and custom ALU including multiplication and division

SKILLS & INTERESTS

Technical Skills: Git, Altium Designer, Cadence PSPICE, AutoCAD Electrical, FPGAs, Test Equipment

Programming Languages: Java, C, C++, Python, MATLAB, R, Verilog

Languages: Native: English | Advanced: Spanish | Beginner: Gujarati

Interests: European Soccer, Cooking, Photography, Violin, International Relations, Home Foosball Champion