

# David M. Young

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<https://www.linkedin.com/in/david-young-27808HI/> | [https://github.com/DavidYoungHI/Project\\_Portfolio](https://github.com/DavidYoungHI/Project_Portfolio)

## EDUCATION

### Washington University in St. Louis, MO

GPA:3.85/4.0

- B.S. in Electrical Engineering
- M.S. in Electrical Engineering

Expected graduation May 2025

Expected graduation May 2026

### Wheaton College, Wheaton, IL

GPA: 3.8/4.0

- B.A. Liberal Arts Engineering, minor in mathematics
- Dean's List (Freshman-Junior)

Degree conferral Expected May 2025

## RELEVANT COURSEWORK

Digital IC Design and Arch. (Sp 2025 Semester) Computer Architecture (Washu)

Control Systems (Washu)

Electronics Laboratory (Washu)

## TECHNICAL SKILLS

- MATLAB - 4 years of academic experience
- Hardware Description Language (VHDL & SystemVerilog) - 2 semesters of experience
- Circuit Simulation Software (PSpice) - 3 semesters of experience
- Proficient use of EE Lab Equipment (O-Scope, DMM, Func-gen, and signal analyzers) - 3 Semesters
- Python - Two semesters of experience
- Bluebeam - Used during A-1 A-lectricians Inc. Internship
- C++ - A semester of experience
- Auto CAD, SolidWorks, and Revit - A semester of experience

## EXPERIENCE

### Summer Intern, A-1 A-lectricians Incorporated, Honolulu, HI

June-July 2021, 2022, 2023,

2024

- Used Bluebeam to read electrical plans to highlight the changes in plan revisions.
- Scanned, printed, and archived RFIs and change orders for Project Engineers.
- Worked alongside a senior estimator, learning the job bidding process.
- Interpreted and analyzed electrical, fire alarm, and security system plans to accurately determine conduit measurements, device counts, and one-line diagrams, ensuring compliance with project specifications and industry standards

### Teaching Assistant - ESE 232: Intro to Electronic Circuits, Washu, STL, MO

January-May 2025

- Hosted office hours to guide students through homework challenges and clarify circuit concepts from lectures.
- Evaluated and graded homework and exams, returning them in a week's time.

## PROJECTS

- RISC-V Instruction Cache Using SystemVerilog:
  - Designed and coded a direct-mapped cache for a RISC-V processor in SystemVerilog.
  - Verified the functionality of the instruction cache using a testbench.
  - The final result delivered instructions with a period of 100 ps, assuming that instructions from the main memory are returned in one clock cycle.
- Insulin Controller:
  - Design a controller for an insulin pump using linear analysis, state-feedback, and a state-observer.
  - Achieved a gain margin of 25% and an infinite phase margin, as determined by the Nyquist Stability Criterion. With this design, the blood glucose level returned to the specified baseline value within 15 minutes of a meal, exhibiting minimal overshoot.
- Least-Square Image Classification:
  - Implemented the least-square method in MATLAB to train a model that classified images from the MNIST Dataset of handwritten digits as either zero or non-zero.
  - When we used 5000 images to train our model, our error rate, false positive, and false negative rates were 1.94%, 1.15%, and 9.39%.

## ADDITIONAL SKILLS

- Conversational proficiency in Mandarin (beginner to intermediate); basic reading and writing skills.