

# Ethan Bloom

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## Education

### The Pennsylvania State University

Computer Engineering, B.S.

Major GPA: 3.94; Cumulative: 3.73

University Park, PA

August 2021 – May 2025

Dean's List (Semester 1 – Present)

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## Internship Experience

### Project Engineering Intern

ProMinent Fluid Controls, Inc.

Pittsburgh, PA

May 2023 – December 2023

- Developed online parametric modeling system for customer and sales applications, allowing for higher customer acquisition and retention rates.
  - Created and implemented spreadsheet tools to streamline Project Engineering calculations, resulting in a 50% reduction in calculation time.
  - Composed 5 Application Guideline documents of Best Engineering Practices for chemical feed systems regarding various chemical applications, metering pumps, and chemical dosing skid systems.
  - Authored and reviewed 10+ detailed engineering documents for customer submittals for multiple projects, including multi-million-dollar water treatment facilities.
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## Project Experience

Project Engineering Design Team, *Team Lead*

August 2021 – December 2021

- Prototyped an innovative, cost-effective rail-line freight transportation design integrating environmentally conscious practices; achieved a 10% reduction in transportation costs while minimizing carbon footprint.
- Analyzed design impact and stakeholder considerations
- Reviewed and developed cost estimations and financial analyses

Sound Equalizer Device, *Electronics and Circuit Design*

April 2023 – May 2023

- Simulated and prototyped circuit using NI Multisim software
- Engineered device to allow for 5-function complete tone control, stereo mixing, and volume control of audio input
- Drafted report documentation and testing specifications

MIPS CPU Design, *System Hardware Design*

May 2023 – August 2023

- Designed and implemented a five-stage, in-order pipeline design with a MIPS-based ISA
  - Modeled the system using Verilog HDL in Xilinx Vivado
  - Analyzed design performance and architectural tradeoffs
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## Involvement

IEEE – Penn State Student Chapter, *Member*

February 2023 – Present

- Developed technical skills through workshops and study sessions

Eta Kappa Nu – Honor Society, *Member*

January 2024 – Present

- Coached undergraduate students in computer science and engineering topics during tutoring sessions
  - Participated in professional development events and skills workshops
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## Technical Skills

- Familiarity with programming languages Python, Java, C/C++, JavaScript, and MATLAB
- Experience using Xilinx Vivado, NI Multisim, KiCad design suites
- System performance monitoring, benchmarking, and evaluation experience
- Computer architecture design using and hardware description languages
- Analog and digital electronic circuit design, including combinational/sequential logic systems and state machines in computer and hardware lab environments
- Proficiency with electronics bench testing equipment