

# David Barber

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## EDUCATION

### **Worcester Polytechnic Institute, Worcester MA**

Electrical and Computer Engineering, Bachelor of Science  
Mechanical Engineering, Bachelor of Science

Expected graduation: June 2027

GPA: 4.0

## EXPERIENCE

### **Advanced Micro Devices (AMD), Foxborough MA • RTL Design Intern**

05/2024 – 08/2024

- Worked on PHY for DDR5 and LPDDR5
- Developed efficient flows for cross-functional information transfer in python
- Wrote scripts to enable scalable usage of assertions
- Exposure to many critical concepts in VLSI design including assertions, clock gating, clock and reset domains, asynchronous and synchronous design
- Developed deeper understanding of industry practices in chip design

### **Worcester Polytechnic Institute, Worcester MA • Research Associate**

09/2023 - present

- Working in WPI's surface metrology lab under Professor Chris Brown
- Developing a program to provide multiscale curvature analysis of discrete data
- Use of MATLAB, Python, C++, Git
- Managing lab websites in WordPress

### **Chelmsford Public Schools, Chelmsford MA • IT intern**

06/2021 - 08/2023

- Deployed technology throughout the school district
- Repaired Windows machines, Chromebooks, Macs, and printers
- Developed troubleshooting skills

### **Code Wiz, Westford, MA • Robotics Coach**

09/2022 – 04/2023

- Taught multiple groups of kids ages 8-12 robot design fundamentals for FIRST Lego League
- Lessons included mechanical and software design, as well as teamwork and collaboration skills

### **Northeastern University, Boston MA • Associate Researcher**

06/2022 – 08/2022

- Northeastern Young Scholars program, working in the helping hands lab
- Developed Python code for a robotic arm to play Connect 4 using computer vision and Min-max algorithm; used tools such as OpenCV, NumPy, Matplotlib and Git
- Formal presentation and demonstration of project

## SKILLS

- **Technical:** Verilog, Python, C/C++, scripting, Linux, VIM, Vivado, Perforce, SolidWorks, MATLAB, Git, oscilloscopes, multimeters, soldering, embedded systems
- **Soft skills:** Communication, organization, adaptability, divergent thinking, planning, leadership

## PROJECTS

### **Stopwatch Circuit Synthesis**

- Designed and synthesized a configurable countdown timer using Verilog and an Artix 7 FPGA with another student in Vivado
- Developed 7 segment display decoder, BCD converter, 8-bit counter, State machine

### **Dassault Systèmes Living Heritage Challenge**

- Part of a team of six students that designed a 3D recreation of the Roman Colosseum using xDesign CAD platform.
- Presented at Dassault Systèmes HQ in Paris, France

### **FIRST robotics alum, Stormgears FRC**

- Mechanical team lead
- Aided in design, manufacturing, assembly and troubleshooting of 4 different robots.