

Matthew Pattok

Student - University of Pennsylvania - School of Engineering and Applied Science
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Education

University of Pennsylvania (in progress)

Computer Science, BSE. Concentration: Software Foundations
Second major in Philosophy. Concentration: Political and Moral
Mathematics Minor

Expected Graduation May 2026

Philadelphia, PA

GPA: 3.51 / 4.0

Skills

- **Programming Languages:** JavaScript/TypeScript, OCaml, C, Python, Java, C#, Bash
 - **Development:** Git & GitHub, Docker, gdb, React.js, Express.js, MongoDB
 - **Other Tools:** GIMP, Microsoft Office, Google Drive, Adobe Premiere Elements
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Work Experience

University of Pennsylvania

Teaching Assistant

August 2023 - August 2024

CIS 2400: Introduction to Computer Systems

- Held office hours to help students understand course and homework
 - Graded written and programming assignments
 - Wrote Bash and JS to aid learning and grading
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Projects

Haskell Prisma (in progress)

Fall 2024

GitHub: <https://github.com/brianbob12/haskell-prisma>

- Pair programming project: Haskell generator for Prisma ORM
- Parses schema.prisma file and outputs Haskell code in module file
- Supports SQLite, implements basic CRUD operations

Webapp Project - SkillExchange

Spring 2024

GitHub: <https://github.com/cis350/group-project-team-15>

- Worked in team rotating Agile roles (Project Lead, Dev, UI, DevOps)
- Implemented frontend with React
- Implemented backend with MongoDB and Express
- Tested project with Jest

Hardware Design for RISC-V

Spring 2024

GitHub: <https://github.com/pattokseas/cis4710>

- Used SystemVerilog to implement the RV32IM specification
- 5-stage pipeline: fetch, decode, execute, memory access, writeback
- AXI4-Lite memory interface