

Garrett Weil

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EDUCATION

Northwestern University | Bachelor of Science in Computer Science with Philosophy Concentration **Sep 2021 - June 2024**

- **GPA:** 3.90/4.0 *Cum Laude* Distinction
- **Coursework:** Low-level Software Development, Operating Systems, Algorithms, Artificial Intelligence, Object Oriented Programming, Data Structures, Discrete Math

Purdue University | Bachelor of Science in Computer Science Double Major with Philosophy **Sep 2020 - May 2021**

- **Transfer GPA:** 3.66/4.0

TECHNICAL EXPERIENCE

Software Engineering/R&D Firmware Internship | Keysight Technologies **June 2023 - January 2024**

- Designed a new production Python API for a vector network analyzer and implemented performance critical, inter-process communication protocols for complex data across language barriers to integrate it into a 5 million line legacy codebase. (**Python, C++**)
- Utilized OOP, Polymorphism, and TFS Source Control to extend existing code to avoid unnecessary refactoring.
- Summer Internship position extended part-time through the school year as a result of excellent performance.

REU Sponsored Research | Exploring Functional Languages for High Performance Computing Applications **Summer 2022**

- Redeveloped the NASA Parallel Benchmark Suite in a functional, memory-managed parallel language. (**Parallel ML**)
- Optimized benchmark performance by exposing novel parallelism, achieved best-case negligible slowdown compared to state-of-the-art implementation. (**C, OpenMP**)
- Authored (2nd) a peer-reviewed research paper, which I presented at the 2023 IPDPS Conference

Independent Low-level Development Project | Exploring Firmware to Make Weak Devices Useful for Security **Spring 2022**

- Worked to create an integrated firmware package with low level packages. (**C, Coreboot, Tor Relay Source**)
- Contributed to a microkernel small enough to be flashed into BIOS flash memory for versatility and security.
- Independently formulated a research proposal and timeline, and subsequently authored a technical report.

LEADERSHIP

President, Responsible Artificial Intelligence Student Organization **2021 - 2024**

- Direct and Organize a 600+ member club, directly interface with an executive committee and delegate strategy goals for committees dedicated to programming workshops, ethics discussions, visiting speakers, local partnerships, and finance.

Technical Research Lead, Northwestern Prescience Lab **2022 - 2023**

- Coordinated and ran several weekly research meetings and hacking sessions, effectively managed 3 other researchers, and acted as technical expert for our research project.

Peer Mentor, Operating Systems Courses **2022 - 2023**

- Hosted open office hours for 6 hours a week, helping students understand core concepts related to operating systems and providing guidance in completing course programming assignments and learning goals.

Treasurer, Northwestern Swim Club **2022 - 2023**

- Coordinated with fellow Exec. Chairs to direct our club towards a welcoming culture, managed a budget of \$24,000 and oversaw the expansion of our club by more than 33%, helped facilitate team travel to 4 meets with ~15 members each.

SOCIETIES AND HONORS

- **Computing Research Association Outstanding Undergraduate Researcher Award** - Honorable Mention
- **Kappa Theta Pi Tech Preprofessional Fraternity** - Kappa Chapter Member
- **National Society of Collegiate Scholars, Alpha Lambda Delta, Phi Eta Sigma**
- **RayMyrt Scholarship** - Awarded to a STEM student for their Academic Merit, Personal Integrity, and Citizenship.
- **John O. Mehrkens Award** - "A senior whose loyalty, devotion, and dependability are especially evident"

SKILLS

Proficiency in C, C++, Python, Java, Javascript, Parallel ML, Git, TFS, Unix, Vim, x86 Assembly, GDB, Bash Scripting
Experience with Tensorflow/Machine Learning | Speaks French | Excellent Communicator