

Philip Wisniewski

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EDUCATION

Purdue University

Bachelor of Science in Computer Science

GPA: 3.97 — Dean's List and Semester Honors all semesters

West Lafayette, IN

Aug. 2023 – May 2027

EXPERIENCE

Incoming Quantitative Developer Intern

Citadel Securities

Jun. 2026 - Aug. 2026

Miami, FL

Undergraduate Researcher

Computational Motion, Manipulation, & Autonomy (CoMMA) Lab

Nov. 2025 – Present

West Lafayette, IN

- Researching usage and training of vision language action models using Franka Panda robot
- Utilizing Python, C++, CycloneDDS, and libfranka for experimentation

Machine Learning Engineer Intern

Rosen Center for Advanced Computing

May 2024 – Nov. 2025

West Lafayette, IN

- Researched and developed queue time prediction model using SLURM workload manager on the ANVIL supercomputing cluster to improve user efficiency, achieving 80% reduction in average percent error
- Co-first-authored publication and presentation: "A Hierarchical Deep Learning Approach for Predicting Job Queue Times in HPC Systems," for workshop at *Supercomputing, 2024*
- Developed and deployed applications leveraging Generative AI for course assignments and tools

High Performance Computing Intern

Pacific Northwest National Lab

May 2025 – Aug. 2025

Richland, WA

- Streamlined and automated the deployment of Open OnDemand to enhance cluster usability and manageability
- Developed applications for supercomputer cluster environments and created containerized templates/tutorials leveraging FlashAttention to optimize GPU training performance
- Learned and applied principles of parallel computing, OpenMPI, and cluster-based workflows while updating internal documentation to improve cluster usability

Research Intern

Mayo Clinic

June 2022 – Aug. 2023

Rochester, MN

- Researched cancer cell line drug resistance based on specific omic data and pathway expressions using ML
- Co-authored publication: "SPIN-AI: A Deep Learning Model That Identifies Spatially Predictive Genes," *Biomolecules*, 2023 May 27; 13(6):895
- Presentation: Selected to present poster at *Individualizing Medicine Conference, Explore the Exposome, 2022*

HIGHLIGHTED PERSONAL PROJECTS

LUMIN (Library for Unified Matrix INfrastructure) | C++, CUDA, MPI, OpenMP, CMake, Python

- Developed a modular matrix operations library supporting single-threaded CPU, multi-core OpenMP, distributed MPI (Open MPI), and GPU-accelerated CUDA backends
- Designed a modular CMake-based build system and benchmarking suite to compare CPU, MPI, OpenMP, and CUDA performance across varying matrix sizes
- Exposed Python bindings via pybind11 and scikit-build for use as a pip-installable Python package

NightCloud | Python (Flask), SQLite, HTML/CSS/JavaScript, Podman (containerization)

- Built a resource-sharing platform turning idle devices into a distributed cloud using containerized workloads
- Implemented backend in Python using Flask and SQLite for managing task orchestration and results along with a lightweight frontend dashboard for task submission and monitoring
- Provided a Python-based client contributor tool with Podman support to securely execute containerized workloads

TECHNICAL SKILLS

Languages: Python, C, C++, C#, Java, Bash, SQL (Postgres, SQLite), R

Developer Tools: Git, Docker/Podman, Ansible, Rancher, SLURM, Open OnDemand, Linux/Unix, Vim

Libraries / Frameworks: Pandas, NumPy, Matplotlib, PyTorch, TensorFlow, Scikit-Learn, Flask, SDL2

High Performance Computing: CUDA, OpenMPI, OpenMP