

Austin Lovell

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EDUCATION

- **Purdue University: M.S. in Computer Science** West Lafayette, IN
GPA: 3.90/4.00 Aug 2025 - May 2027
- **Purdue University: B.S. in Computer Science** West Lafayette, IN
GPA: 3.83/4.00 Aug 2021 - Dec 2024
- **Coursework:** Deep Learning, Data Mining and Machine Learning, Software Engineering, Artificial Intelligence, Systems Programming, Data Structures and Algorithms, Object-Oriented Programming, Computer Architecture, Linear Algebra

EXPERIENCE

- **Pacific Northwest National Laboratory** Richland, WA
Software Engineering Intern May 2025 - Aug 2025
 - Created software deployment pipelines with automated Python profiling using Docker and GitLab CICD
 - Assisted researchers in configuring and running LLM interpretability projects using NNSight and PyTorch
 - Automated OS installation and environment configuration for HPC nodes using Ansible
- **Summer Undergraduate Research Fellowship** Purdue University
Research Fellowship May 2024 - Aug 2024
 - Developed a hierarchical deep neural network with PyTorch to predict job queue times on Anvil, a Top 500 supercomputer
 - First authored and presented a research paper at SC24, the largest HPC conference
 - Paper: A Hierarchical Deep Learning Approach for Predicting Job Queue Times in HPC Systems
- **Indigo BioAutomation** Carmel, IN
Software Engineering Intern May 2023 - Aug 2023
 - Developed an interactive visualizer for liquid chromatography/mass spectrometry experiment data in Python and C++
 - Optimized memory usage of experiment data during processing using C++ and Protobuf
 - Designed a method to model composite baselines for chromatograms using XGBoost's gradient boosting algorithm
- **Matrix Design Group** Newburgh, IN
Software Engineering Intern May 2022 - Aug 2022
 - Trained a safety-focused computer vision objection detection model for embedded devices using Python and TensorFlow
 - Designed a database with Python and SQLite for storing the results of Factory Acceptance Testing
 - Developed software for automatically analyzing network traffic using Wireshark and Lua

RESEARCH

- **Undergraduate Research** Purdue University
Researcher Sep 2023 - May 2025
 - Researched and implemented computer vision methods using PyTorch to track human facial movements during speech for improved diagnosis of sensorimotor issues. Achieved sub 1 millimeter error tracking accuracy with novel methods. Advised by Prof. Raymond Yeh and Prof. Kwang S. Kim at Purdue University
 - Paper Preprint: 3D markerless tracking of speech movements with submillimeter accuracy

ACADEMIC PROJECTS

- **Undergraduate Teaching Assistant** Purdue University
Teaching Assistant Aug 2023 - May 2024
 - Advised students and answered questions in weekly lab sections for a C++ based systems programming course
 - Evaluated code standards and graded exams for over 2,000 student submissions

SKILLS SUMMARY

- **Languages:** Python, C, C++, SQL, Java, JavaScript, Lua, Bash
- **Tools:** Linux, Git, PyTorch, TensorFlow, NumPy, pandas, Ansible, SQLAlchemy, MongoDB, Docker, Lex, Yacc, LaTeX

HONORS AND AWARDS

- **Purdue University:** Department of Computer Science Kunze Scholarship award winner (2024)
- **Purdue University:** Selected for Summer Undergraduate Research Fellowship (2024)
- **Purdue University:** Department of Computer Science "Outstanding Freshman" award winner (2021-2022)