# Austin Lovell

✉ lovella@purdue.edu ⌗ github.com/austinlovell25 in linkedin.com/in/austinrlovell

## EDUCATION

**Purdue University: M.S. in Computer Science**  West Lafayette, IN
*GPA: 4.00/4.00*  *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 chromatrography/mass spectromery 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)