MAKSIM LAVRENKO

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EDUCATION

Purdue University
B.S. in Computer Science & Mathematics — GPA: 3.99/4.0 — August 2022 - May 2025
M.S. in Computer Science — August 2024 - May 2026

WORK EXPERIENCE

Teaching Assistant — CS 381 (current), CS 251 (current), CS 250, CS 182 — January 2024 - Present
Purdue University, Department of Computer Science

- Instructed and supported classes ranging from **60** to **800** students, adapting teaching strategies to varied class sizes.
- Conducted grading, held office hours, facilitated labs, and led collaborative sessions.
- Enhanced student comprehension and provided detailed feedback on assignments.

Community Assistant — May 2024 - August 2024
Purdue University, University Residences

- Managed check-in and check-out procedures for over **100** attendees, ensuring a smooth transition.
- Handled emergency situations with priority, demonstrating capability in crisis management and quick decision-making.
- Provided high-level customer service, including the distribution and management of equipment, keys, and mail.

RESEARCH EXPERIENCE

Ensemble Methods Survey — August 2024 - December 2024
Purdue University, Department of Computer Science

- Conducted a **12 page** page survey of ensemble methods, including random forests, adaboost, and xgboost.
- Applied ensemble methods to **8** real-world datasets, including the **Adult dataset**, **bank marketing dataset**, and more.
- Used scikit-learn to implement models and evaluate their performance on various metrics.

PROJECTS

Machine Learning Projects | Python, scikit-learn, TensorFlow — August 2024 - Present

- Developed a variety of machine learning models, such as kNN, linear regression, decision trees, and neural networks.
- Applied models to real-world datasets, such as the Iris dataset and the MNIST dataset.
- Utilized scikit-learn and TensorFlow to implement models and evaluate their performance.

Better Housing Bot | Python, Discord.py, BeautifulSoup — December 2023

- Created a **Discord bot** to streamline the search for on-campus housing at Purdue University.
- Implemented **real-time** dorm and apartment availability tracking through web scraping.
- Features included automatic updates, a notification mute function, and on-demand checks.
- Assisted **4** others in securing convenient on-campus housing, avoiding costlier alternatives.

LaTeX Matrix Calculator Website | Flask, numpy, React, Heroku — June - July 2023

- Engineered a web application for LaTeX users to manage matrices and linear algebra operations.
- Provided LaTeX code generation for matrix operations, using Flask and React.
- Deployed on Heroku, optimizing for usability and access (currently inactive due to hosting costs).

COURSEWORK

Computer Science	Advanced Algorithms, Data Structures, Machine Learning, Statistical Machine Learning, Artificial Intelligence, Theory of Computation, Computer Networks, Compilers
Mathematics	Linear Algebra 1 & 2, Multivariable Calculus, Differential Equations, Probability Theory

TECHNICAL STRENGTHS

Programming Languages	Python, C++, C, Java, R
Machine Learning	TensorFlow, scikit-learn, PyTorch, Keras, pandas
Web Technologies	Node.js, React.js, JavaScript, TypeScript, HTML5, CSS
Databases	SQL, PostgreSQL, MongoDB
Other Tools	Git, LaTeX, Jupyter Notebook, Docker, Linux, Bash