MAKSIM LAVRENKO

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EDUCATION

Purdue University

M.S. in Computer Science	GPA: 4.00	August 2024 - May 2026
B.S. in Computer Science & Mathematics	GPA: 3.99	August 2022 - May 2025

WORK EXPERIENCE

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

- Courses Taught: Analysis of Algorithms, Data Structures, Computer Architecture, Discrete Mathematics
- 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.

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 - December 2024

- 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.

LLVM Compiler | C++, LLVM   January 2025 - May 2025

- Developed an LLVM-based compiler in C++ for a subset of the C language.
- Implemented multiple optimizations, such as dead code elimination, loop detection, and SSA form conversion.

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.

TECHNICAL SKILLS

Languages & Technologies	Python, C++, C, Java, R, TensorFlow, PyTorch, Linux, LaTeX
Graduate Coursework	Software Engineering, Computer Networks, Compilers, Theoretical Computer Science Toolkit, Theory of Computation, Randomized Algorithms, Statistical Machine Learning