

# MAXIM LAVRENKO

maximus (Github) maxim-lavrenko (LinkedIn)  
(765) 767-1245 ♦ redundantbirch@gmail.com

## EDUCATION

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### Purdue University

B.S. & M.S. in Computer Science, Machine Learning Track  
B.S. in Mathematics

Accelerated 3+1 Program  
Dean's List & Semester Honors

August 2022 - May 2026

GPA: 4.0/4.0

GPA: 4.0/4.0

Overall CGPA: 3.99/4.0

Start Graduate Studies: August 2025

August 2022 - Present

## WORK EXPERIENCE

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### Teaching Assistant

January 2024 - Present

Purdue University, Department of Computer Science

- Algorithms (CS 381), Data Structures (CS 251), Computer Architecture (CS 250), Discrete Mathematics (CS 182)
- 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.

## COURSEWORK

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**Computer Science** Machine Learning, Statistical Machine Learning, Deep Learning, Natural Language Processing, Advanced Algorithms, Data Structures, Artificial Intelligence

**Mathematics** Linear Algebra 1 & 2, Multivariable Calculus, Differential Equations, Probability Theory

## PROJECTS

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### Machine Learning Projects | Python, scikit-learn, TensorFlow

August 2024 - Present

- Developed a variety of machine learning models, like 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.

### MLE vs MAP Simulation Project | Python, NumPy, Matplotlib

August 2024

- Developed a simulation to compare MLE and MAP methods in estimating the bias of a coin.
- Demonstrated model differences and efficiencies using Python, NumPy, and Matplotlib.
- Created an interactive script for dynamic simulation parameter adjustments.

### 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 several users 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).

## TECHNICAL STRENGTHS

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### Programming Languages

Python, C++, C, Java, R

### Machine Learning

TensorFlow, scikit-learn, PyTorch, Keras, pandas

### Web Technologies

Node.js, React.js, HTML5, CSS

### Databases

SQL, PostgreSQL, MongoDB