Toan Vo

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Professional Summary

Software Developer and Machine Learning enthusiast with 3 years of experience in software development and 2 years of hands-on experience in machine learning. Proficient in software engineering with strong expertise in Python, C/C++, and JavaScript. Experienced in developing machine learning models, with a focus on Deep Learning and Data Analysis. Familiar with popular ML frameworks such as TensorFlow and PyTorch, with a growing interest in robotics and its applications in real-world projects.

Education

University of Wisconsin - Madison Madison, WI

B.S., Computer Science. GPA: 3.86/4 *Expected May 2026*

- **Relevant courses**: Statistical Modeling, Data Structures, Object-Oriented Programming, Multivariate Calculus, Linear Algebra, Deep Learning for Computer Vision, Algorithms, Matrix Methods in Machine Learning.
- Third prize - **Machine Learning Marathon 2024**
- Finalist - **Madhacks Fall 2023**

Technical Skills

Languages: Java, Python, C/C++, R
Developer Tools: Git, Linux, VS Code, RStudio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib, PyTorch, Scikit-learn

Experience

Student Researcher (Machine Learning and Robotics) May 2024 – August 2024

University of Utah, advisor: Professor Alan Kuntz *Salt Lake City, UT*

- Pioneered a machine learning model for predicting tendon robot shape based on current robot configuration using long short-term memory (LSTM), exceeding the previous learning-based technique by 11%.
- Engineered a Bayesian optimization approach to automate surgical tasks, improving tissue retraction efficiency and precision, resulting in a 15% boost in efficiency and 10% better attachment point detection accuracy.

Academic Coach August 2023 – May 2024

University of Wisconsin - Madison *Madison, WI*

- Provide one-on-one tutoring sessions on introductory CS and Math courses for nearly 50 students weekly.
- Offer guidance on effective study techniques, time management, and test preparation to help students enhance their academic performance.

Projects

Workspace Manager | *MongoDB, Javascript, Git* November 2023

- Formulated with a team of four to build an application for simplifying workspace management for enhanced workflow efficiency.
- Integrated MongoDB to manage user settings, workspaces, and application preferences, reducing setup time by 50% through automated launching of multiple applications, streamlining the work environment process.
- Established user authentication and encrypted accounts for secure access, allowing unlimited number of users to create and manage personalized workspaces.

SAT Score Analysis and Impact of Attendance on SAT Scores | *R* October 2022 – December 2022

- Conducted an analysis of the correlation between mean SAT scores and school attendance in New York high schools using 2010 data, revealing key insights into the impact of attendance on SAT performance.
- Integrated R for data cleaning, processing, and conducting hypothesis testing to identify significant differences between SAT reading and writing scores, revealing a mean difference of 6.54 points.

Highway Crossing | *OpenGL, C#* January 2022 – May 2022

- Designed a 3D car highway crossing game with integrated audio effects and 3D models/textures for cars, roads, and environmental elements using OpenGL, enhancing both the gaming experience and visual appeal.
- Reduced game latency by optimizing collision detection and improving OpenGL rendering for 3D models and textures, achieving a 20% decrease in latency and smoother, more responsive gameplay.