# Huy Vu

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## EDUCATION

**Purdue University**                                                      Spring 2027
*Bachelor of Science in Computer Science, Minor in Mathematics*                 *GPA: 3.6/4.0*

- **Awards:** Dean's List & Semester Honors (2023 - 2024)
- **Relevant Coursework:** Multivariate Calculus, Object-Oriented Programming, Discrete Mathematics, Linear Algebra*, Data Structures & Algorithms*, Computer Architecture*

## EXPERIENCE

**Purdue University**                                                  Aug. 2024 – Present
*Undergraduate Teaching Assistant*                                        *West Lafayette, IN*

- Developed and maintained automated JUnit test cases for **a class of 400 students**, reducing the time to grade weekly assignments by 30%.
- Held two lab sessions to assist **50+ students** in debugging Java applications and providing clarity on course topics about Object-Oriented Programming and Concurrency through Ed Discussion.

**Hyperlogy**                                                          May. 2024 – Jul. 2024
*Software Engineer Intern*                                                       *Hanoi, VN*

- Redesigned the vending machine user interfaces, **reducing load time by 30%**.
- Integrated **Firebase** for real-time data management, **improving data retrieval speed by 20%** and enabling instant inventory updates.

**Caterpillar Inc.**                                                   Aug. 2023 – May 2024
*Data Science Researcher*                                                 *West Lafayette, IN*

- Created a robust data pipeline for 100+ risk factors affecting the company's supply chain from open-source data.
- Utilized Excel, Pandas and Numpy in data preprocessing techniques to create a country-year level master table, **enhancing the effectiveness of machine learning model training by 15%.**
- Forecasted time series data by using **Python's PyCaret**, visualizing the result with line graphs and bar charts using **Power BI dashboards.**

## PROJECTS

**Mentis.AI** | *HTML/CSS, JavaScript, Node.js, Express.js, PostgreSQL*        Mar. 2025 – Present

- Built a fullstack web application to provides emotional support through guided journaling, daily mood tracking and self-reflection tools.
- Integrated an NLP-powered AI chatbot to help users express emotions, and utilized the Spotify API to provide personalized song recommendations based on mood.

**Fruit Detection** | *Python, Java, PHP, OpenCV*                          Aug. 2024 – Dec. 2024

- Developed an Android mobile phone application that identifies fruit types based on shape and integrated camera functionality for users to capture images.
- Streamlined data synchronization and transmission between the app and the backend server over HTTPS, **reducing data transfer latency to 150ms.**
- Reduced background interference using Sobel edge detection and Otsu's thresholding, achieving the accuracy of 85% in training K-Nearest Neighbor model for binary classification.

**Connection Space** | *Java*                                             Mar. 2024 – May 2024

- Led a team of 5 to develop a social media platform designed to support **10+ concurrent users** and built interactive interfaces with Java Swing.
- Enhanced system reliability by implementing a robust user authentication system, real-time messaging feature and structured data management with CSV files.

## TECHNICAL SKILLS

**Languages**: Java, Python, C/C++, JavaScript, HTML/CSS, SQL
**Developer Tools**: Git, Github, IntelliJ, VS Code, Android Studio