

Vamsi Deeduvanu

(765)-694-9091 | vamsi10010@gmail.com | [linkedin.com/in/vamsideeduvanu/](https://www.linkedin.com/in/vamsideeduvanu/) | github.com/vamsi10010

EDUCATION

Purdue University <i>Masters of Science in Computer Science</i>	Aug. 2025 – May 2026 West Lafayette, IN
Purdue University <i>Bachelor of Science in Computer Science</i>	Aug. 2022 – May 2025 West Lafayette, IN
<ul style="list-style-type: none">• <i>Coursework:</i> OOP, Calculus, Linear Algebra, Statistics, Data Structures and Algorithms, Computer Architecture, Machine Learning, Systems Programming, Robotics• <i>Honors:</i> Dean's List and Semester Honors, L3Harris Scholarship, Poster Award at UG Research Expo• <i>GPA:</i> 4.0/4.0	

EXPERIENCE

Undergraduate Teaching Assistant <i>Department of Computer Science, Purdue University</i>	Aug. 2023 – Present West Lafayette, IN
<ul style="list-style-type: none">• Provided instructional assistance to students in CS 240 (Programming in C) and CS 252 (Systems Programming).• Enhanced student's learning outcomes by conducting weekly lab sessions and office hours for 40+ students.• Actively monitored online discussion forums to resolve student's questions outside of class.	
AI/ML Intern <i>Volvo Group</i>	May. 2024 – Aug. 2024 Hagerstown, MD
<ul style="list-style-type: none">• Designed an edge AI pipeline to track truck service on factory floor using YOLOv8n and PaddleOCR models.• Developed a live web interface using Streamlit to monitor KPIs such as truck count and takt time on-prem.• Utilized Azure ML Studio conduct labeling, automate model training, and generate containers for deployment.• Leveraged VAR and LSTM models to forecast service requests to reduce downtimes and improve service efficiency.	
Undergraduate Researcher <i>TinyML/IIoT, Purdue University</i>	Aug. 2023 – Dec. 2023 West Lafayette, IN
<ul style="list-style-type: none">• Collaborated with local industry partners to establish a low-cost IIoT-based machine monitoring framework.• Developed a data pipeline to collect and process real-time machine and sensor data using MTConnect.• Labelled and annotated sensor data to train a deep learning model to predict machining failures.	
Data Science Researcher <i>Battelle</i>	Aug. 2022 – May 2023 West Lafayette, IN
<ul style="list-style-type: none">• Conducted research on hyperparameter tuning algorithms for LLMs and established an SOP for future projects.• Fine-tuned BioBERT from HuggingFace to accurately identify adverse drug events in electronic health records.• Boosted overall f1 score by more than 20% using hyperband and population-based algorithms from RayTune.	

PROJECTS

UNIX Shell <i>C, C++, Flex, Bison, UNIX</i>	Jan. 2024 - May. 2024
<ul style="list-style-type: none">• Built a UNIX shell interpreter with support for complex command parsing and subshell execution.• Integrated wildcard expansion using C++ regex to execute commands on multiple files simultaneously.• Designed a feature rich line editor supporting command history, path completion, and prompt customization.	
hirehack <i>Python, JavaScript, PyTorch, HuggingFace, PRAAT, WebSpeech API</i>	Jan. 2024 - Feb. 2024
<ul style="list-style-type: none">• Developed a Chrome extension to automatically analyze interview performance and provide feedback.• Integrated facial emotion, prosodic, and lexical features into a multi-modal model to score interview performance.• Interfaced Mixtral-7B from HuggingFace API to interpret model output and generate feedback in real-time.	
cgrad <i>C, cmocka, Deep Learning</i>	Aug. 2023 – Sep. 2023
<ul style="list-style-type: none">• Created a lightweight neural network library from scratch in C achieving 96% accuracy on MNIST dataset.• Programmed support for layers, activation functions, gradient descent methods, and regularization options.• Automated testing process and ensured functionality by creating unit tests using cmocka framework.	

SKILLS

Languages: Python, C, C++, Java, SQL (Postgres), R, JavaScript, LaTeX, x86-64 Assembly
Developer Tools: Git, Bash, Linux, MTConnect, XML, Azure DevOps, Thingworx, Agile Methodologies
Libraries: PyTorch, HuggingFace, Keras, Ultralytics, RayTune, Scikit-Learn, Streamlit, Pandas, NumPy, Matplotlib