

Vamsi Deeduvanu

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EDUCATION

Purdue University <i>Masters of Science in Computer Science</i>	Aug. 2024 – May 2026 GPA: 4.0/4.0
Purdue University <i>Bachelor of Science in Computer Science</i>	Aug. 2022 – May 2025 GPA: 3.99/4.0
<ul style="list-style-type: none">• <i>Coursework:</i> OOP, DSA, Computer Architecture, Systems Programming, Compilers, AI, Machine Learning, NLP, Robotics, ML Systems, Randomized Algorithms, Statistical Theory• <i>Honors:</i> Dean's List and Semester Honors (6x), L3Harris Scholarship, UG Research Expo Award	

EXPERIENCE

Software Development Engineer Intern <i>Amazon, Project Kuiper</i>	May. 2025 – Aug. 2025 Redmond, WA
<ul style="list-style-type: none">• Developed a cost tracing service with RESTful API improving supply chain cost visibility for Project Kuiper.• Deployed a scalable serverless data pipeline on AWS achieving sub-10ms queries on millions of cost events.• Built an MCP agent using Neo4j and Claude enabling non-tech stakeholders to perform natural language queries.	
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 identify service bottlenecks on factory floor using YOLOv8n and PaddleOCR.• Developed a live web interface using Streamlit to monitor KPIs such as truck count and takt time on-site.• Leveraged VAR and LSTM models to forecast service requests to reduce downtimes and improve service efficiency.	
Undergraduate Teaching Assistant <i>Department of Computer Science, Purdue University</i>	Aug. 2023 – May 2025 West Lafayette, IN
<ul style="list-style-type: none">• Mentored undergraduate students on foundational concepts in C programming and systems programming courses.• Developed programming assignments and test frameworks to automate evaluation of students' understanding.• Led weekly lab sessions and office hours for 40+ students enhancing student learning outcomes and grades.	
Undergraduate Researcher <i>TinyML/IIoT, Purdue University</i>	Aug. 2023 – Dec. 2023 West Lafayette, IN
<ul style="list-style-type: none">• Developed a data pipeline to collect and process real-time CNC machine and sensor data using MTConnect.• Labelled and annotated sensor data to train a CNN to predict machining failures with > 90% accuracy.	
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, R, JavaScript, TypeScript, Smithy, LaTeX, x86-64 Assembly
Developer Tools: Git, Bash, Linux, MacOS, LLVM, AWS, IaC, Docker, Neo4j, REST API, uv
Libraries: PyTorch, HuggingFace, Keras, Ultralytics, RayTune, Streamlit, PySpark, Tensorflow, AWS CDK