Divya Bhanu Pothavajhyula

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https://dbpoth.github.io/dbp-personal-website/

Education

University of Michigan – College of Engineering, Ann Arbor, MI *August 2022 – Dec. 2025*
Bachelor of Science in Engineering (B.S.E), Computer Science; Minor in Physics
GPA: 3.8 / 4.0
Activities: Engineering Honors Program, Multidisciplinary Design Program (MDP)
Relevant Coursework: Machine Learning, Software Engineering, Web Systems, Applied Linear Algebra, Data Structures & Algorithms, Discrete Math, Foundations of Computer Science, Computer Organization, Statistics & Data Analysis

Work Experience

Software Engineering Intern – Lockheed Martin, Grand Prairie, TX *May – August 2025*

- Role expected to involve full stack development, software tools, and embedded systems (details to be added upon completion)

Instructional Aide – Introduction to Computers and Programming, Ann Arbor, MI *August 2023 – Present*

- Lead weekly lab sections for 24 students and host 5+ hours of office hours weekly
- Teach core programming concepts in MATLAB / C++ (e.g., graphical analysis, data structures)

Teaching Assistant – Medlytics Course, MIT Beaver Works, Cambridge, MA *Summer 2023 – Present*

- Instructed ∼40 students in machine learning concepts / algorithms like decision trees, CNNs, SVMs, and model tuning
- Designed / delivered instructional materials (e.g., lectures, practice problems) to reinforce concepts / support student mastery
- Provided individualized project support through debugging assistance and hyperparameter optimization

Project Experience

Real-Time Object Detection for Construction Safety – Walbridge & MDP, Ann Arbor, MI *Dec. 2024 – Present*

- Developing real-time object detection models using YOLOv8, PyTorch, TensorFlow, and Keras
- Trained models on 20GB+ video datasets to detect hazards, achieving 0.87 accuracy (target: 0.90+)
- Fine-tuned detection thresholds / implemented data augmentation to improve model robustness under varied lighting conditions
- Collaborating with Walbridge engineers and U of M faculty on requirements and model architecture

Adaptive Designs for Safety Equity Research Team – Univ. of Michigan, Ann Arbor, MI *Dec. 2022 – Present*

- Conduct statistical analyses using machine learning to study correlations between bone morphology and injury risk
- Selected to present findings at the 2024 Injury Biomechanics Symposium in Canada

Instagram Clone – Full Stack Web Application, Ann Arbor, MI *Fall 2024*

- Built a working replica of Instagram with features like user authentication, post uploads, commenting, liking, and infinite scroll
- Developed using Python, JavaScript, React, HTML / CSS; integrated front-end / back-end via REST APIs and SQL

Medlytics Program – MIT Beaver Works, Cambridge, MA *Summer 2021*

- Built ML models (e.g., random forests, NNs) in Python to detect medical conditions such as hypothyroidism and cancer
- Capstone Project: Developed a neural network to classify retinal scans for early detection of eye conditions

Skills & Interests

Programming Languages: C++, Python (TensorFlow, PyTorch, Keras), JavaScript, HTML / CSS, React, MATLAB, Java
Tools & Technologies: AWS (EC2, S3), Flask, GitHub, SQL, Adobe Creative Cloud, LaTeX, Agile development, Microsoft Office
Machine Learning: CNNs, RNNs, (Vision) Transformers, clustering / boosting algorithms, encoders, SVMs
Outside Interests: Video editing, driving, reading (mystery / fiction), traveling, trying new foods

Achievements

- University of Michigan Engineering Dean's Honor List (all terms)
- Recipient, UM Richard Earhart Scholarship (merit-based academic scholarship)
- MDP Summer Fellowship Award & 1st Place Poster on Parametric Modeling of the Upper Extremities
- Top 10% Scorer, Breakthrough Junior Challenge Video Competition