Uma Maheswar Reddy Maram

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PROFESSIONAL SUMMARY

Eager Computer Science student with a solid foundation in Python, machine learning, and data science. Proven ability to tackle complex problems and deliver innovative solutions. Seeking a summer internship to bring new insights and contribute to technological advancements.

EDUCATION

Bachelor of Science in Computer Science and Engineering Anticipated Graduation May 2026
The University of Toledo, Toledo, Ohio CGPA: 3.73 / 4.0
Relevant Coursework: Data Structures, Machine Learning, Statistics, Java Programming, Database Management Systems

WORK EXPERIENCE

Research Intern
MulticoreWare Inc., India September 2022 – June 2023

- Engineered an unique and innovative object detection and segmentation algorithm using deep learning techniques.
- Trained a custom YOLO model on road images and achieved 89% accuracy and optimal speed in detecting and identifying vehicles, pedestrians, and traffic signs.
- Measured the performance of the models using standard and reliable metrics such as mean average precision (mAP), intersection over union (IoU), and frames per second (FPS) and compared them with the state-of-the-art benchmarks.
- Demonstrated practical and scalable real-time capabilities by running the model on a Raspberry Pi and a webcam, processing 30 frames per second, and detecting 10 objects per frame.

TECHNICAL SKILLS

- Programming Languages: Python, R, SQL and Java
- Frameworks and Libraries: TensorFlow, Pytorch, OpenCV, Numpy, Pandas, Sci-kit learn
- Data Science Tools and Techniques: Data Preprocessing, Training AI Models, Computer Vision, NLP, Data Analytics, Power BI
- Cloud Platforms: Google Cloud, Azure, and AWS
- Microsoft Office Suite (Word, Excel, & PowerPoint)

PROJECTS

Real-time Hand Gesture Recognition Using TensorFlow and OpenCV

- Developed a real-time hand gesture recognition system using MediaPipe, TensorFlow, and OpenCV
- Used MediaPipe to detect and track 21 hand keypoints and fed them into a pre-trained neural network to classify 10 hand gestures.
- Achieved a 95% accuracy rate on a custom dataset of hand gesture images and videos.
- Demonstrated the system's potential for various applications such as virtual reality control, sign language translation, and music creation.

Parking Lot Ticket Management System Using Java and SQL

- Designed and built a scalable Java application for a parking lot ticket management system, reducing processing time by 20% compared to manual systems
- Collaborated effectively with the team to ensure the project's timely completion and successful implementation.

CERTIFICATIONS

- Microsoft Certified: Azure AI Fundamentals – Microsoft, 2023
- 2022 Complete Python Bootcamp From Zero to Hero in Python – Udemy, 2022
- Advanced Learning Algorithms – DeepLearning.AI, 2022

AWARDS & ACHIEVEMENTS

- Co-Author, "FlowerBot: A Deep Learning Aided Robotic Process to Detect and Pluck Flowers," ICECA, 2022
- Awarded first prize in the Kalasalingam University's IoT Competition for Environment
- Best Technical Paper Presentation at IBM (April 2023)