Ashwath L

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WORK EXPERIENCE

Junior Data Scientist – **Delta Software Solutions** *Sep 2024 – Jan 2025*

- Designed and developed deep learning models for object detection, recognition and tracking tasks, achieving an accuracy improvement of 15-20% over the baseline models.
- Deployed real-time computer vision applications capable of processing 30+ fps, ensuring high performance and scalability.
- Collaborated with cross functional teams to deliver AI solutions aligned with business objectives which reduced manual effort by 40%

AI Engineer – **Envidox Solutions** *Jan 2024 – Sep 2024*

- Developed a no-code chatbot builder (Envichat) enabling users to create and deploy chatbots on platforms like WhatsApp within minutes.
- Built ML pipelines and optimized computer vision models for Livetrack#4, a low-latency motion capture system ensuring smooth human movement tracking.

PROJECTS

Traffic Analysis System for Multi-Class Vehicle Classification and Movement Tracking

- Designed a traffic analytics solution capable of classifying vehicles into 13 distinct categories, scaling from the initial 4-class segmentation.
- Tracked vehicle movements to analyze patterns (right, left, Through, U turns) from all cardinal directions, covering 4 major directions and 8 sub-directions.
- Achieving a real-time performance with a system capable of handling traffic data at rates exceeding 30 fps.
- Researched about the approaches to overcome analytical challenges in timelapse videos.

AI-Based Smart Parking Lot Detection

- Built a real-time parking space management system using object detection algorithms like YOLO and TensorFlow, resulting in a 40% reduction in manual monitoring efforts and a 25% increase in parking lot efficiency.
- Integrated OpenCV for image processing and computer vision tasks.
- Achieved a detection accuracy of 90%, reducing average user search times for parking by 50% and increasing lot occupancy rates by 35%.

EV Charging Demand Prediction and Optimization

- Developed a data-driven forecasting model to predict EV charging demand using time-series analysis and machine learning.
- Built an ETL pipeline for data cleaning, feature engineering, and real-time analytics to optimize charging station efficiency.
- Deployed a FastAPI-based ML model to enable real-time demand predictions, improving station utilization and grid load balancing.

EDUCATION

KGiSL Institute of Technology, B.Tech - Artificial Intelligence and Data Science (CGPA – 8.24**)** *Apr 2020 – Jun 2024*

Maharishi Vidya Mandir, *Higher Secondary School* *Apr 2019 – Mar 2020*

CERTIFICATIONS AND KEY SKILLS

Certifications: Data Visualization using Python – Coursera Project Network (Dec 2021) • Exploratory Data Analysis for Machine learning - IBM (Nov 2022) • Machine Learning with Python – IBM (Dec 2022) • Machine Learning - IBM (Apr 2023) • Cloud foundations - AWS academy (Jul 2023) • Data Visualization with python - Coursera Project work (Dec 2021) • Computer Vision with embedded Machine learning - EDGE IMPULSE (Sep 2023)

Tools: Roboflow • Data Analysis Tools (Power BI, MS Excel) • Microsoft Office Suite

Technical Skills: Programming Languages (Python) • Database Management (MySQL, PostgreSQL) • Web Development (HTML, CSS) • Data Analysis and Visualization (Pandas, NumPy, data cleaning, statistical analysis, Matplotlib, Seaborn) • Machine Learning (Scikit-learn, Tensorflow, Keras, Mediapipe-pose) • Docker • Data Science Pipelining

Soft Skills: Communication • Leadership • Problem-Solving • Time Management • Adaptability • Teamwork • Resilience

ACHIEVEMENTS

- SIH Internal Hackathon – Pre-finalists.
- Amazon ML Hackathon – 72 Hours – 70th Position
- Yugam 2023 – 48 Hour Hackathon