Ayush R David

Bachelor of Technology
Computer Science and Engineering
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. (CSE(AI))	Karunya Institute of Technology and Sciences, Coimbatore	8.77	2023-2027
Senior Secondary	ISCE Board	86%	2021
Secondary	ISC Board	87%	2023

Experience

- **Karunya Innovation and Design Studio** *Present*
  Computer Vision Engineer Trainee Coimbatore India
  – Gaining hands-on experience in the field of Computer Vison by building and implementing real time projects.
- **NVIDIA Student Network Karunya** *Present*
  Team lead Coimbatore India
  – Gaining the practical skills and connecting with like-minded students all over the world. Having access to exclusive training, tools, and projects helping build competency and professional development.

Projects

- **IOT based Smart Irrigation System for Agriculture** *March. 2024*
  Implemented a fully automated irrigation system
- **Depth Vision, Spatial Mapping, GeoLocalization -Positional Tracking using ZED2i and Jetson Nano** *April 2024*
  TO enable enhanced depth perception for autonomous systems.
- **Retail analytics ,Body pose estimation,Anomaly detection, license plate recognition using Deep Stream** *July - August 2024*
  Implemented the above using Deep Stream through RTSP .
- **HIL-Based Vehicle Control Simulation Test Bench** *November 2024*
  In-house testing platform using simulated throttle steering, and braking responses to driver input.
  – **Tools & technologies used**: CARLA, CAN Bus, Hardware-in-the-Loop (HIL) Systems
  – **CAN Communication**: Simulates vehicle control messages in CAN format.
  – **HIL Integration**: Connects with actuators for realistic simulation.
  – **Simulation Environment**: Uses CARLA for real-time vehicle behavior visualization.
- **CARLA and Autoware** *Dec 2024*
  Implemented a autonomous driving test bench integrating and Auto-ware with CARLA Simulator
  – **Tools & technologies used**: CARLA,Auto-ware,Zenoh
- **Optical Flow and Object Detection** *feb 2025*
  A solution for tracking objects by integrating optical flow and object detection
- **Nvidia Occupancy Analytics** *feb 2025*
  A solution for tracking and visualizing occupancy using live CCTV footage for university
  – **Tools & technologies used**: Nvidia DeepStream, RTSP, Computer Vision, Grafana, Postgresql, kafka,docker
  – Processes RTSP CCTV streams as the primary input source for occupancy tracking.
  – Uses Nvidia DeepStream for real-time video analytics.
  – Kafak : Used for real time data transfer
  – Postgresql: TO store metadata
  – Grafana : for detailed occupancy examination and analysis.
  – Docker : for containerized deployment

Technical Skills

–**Programming:** C/C++, Python, JAVA, SQL
–**Tools & OS:** Git, Jupyter Notebook, Google Colab, Linux, Windows
–**Libraries/Frameworks:** Pandas, Numpy, scikit-learn,Keras,TensorFlow,DeepStream,TAO Toolkit
–**Web Skills:** HTML/CSS/JS,

Leadership/Extracurricular

– **AI Club ,** KIDS *2023-2024*
– **Arduino training Boot Camp Instructor ,** KIDS *2024-*
– **Computer Vision Trainee ,** KIDS *2024-*
– **NVIDIA Student Net-work Lead** Karunya *2024-*

Certifications

- NVIDA Certification on Getting Started with AI on Jetson Nano
- NVIDA Certification on Fundamental of Deep Learning
- NVIDA Certification on Building Video AI Applications On Jetson Nano
- NVIDA Certification on Building transformer based NLP applications
- NVIDA Certification on Fundamentals of accelerated computing |CUDA|Python
- NVIDA Certification on Fundamentals of accelerated computing |CUDA|C/C++
- NVIDA Certification on Application of AI for predictive maintenance
- CISCO Certification on Programming essential in C
- CISCO Certification on Programming essential in Python
- IBM Certification on Getting Started with enterprise grade AI
- IBM Certification on Getting Started with enterprise Data Science
- CISCO Certification on Cyber Security essentials