Ammar Yasir Naich

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Summary

Machine Learning and AI Engineer with 10+ years of experience, seeking full-time Machine Learning Engineer roles. I'm deeply interested in how machine learning and AI can change the future of Autonomous Vehicles. I'm about to finish my Ph.D. with a research focus on the development and optimization of Convolutional and Vision Transformer models to address intricate challenges in vision-based tasks, including 3D detection in Autonomous Vehicles. My experience as a Technical Manager, Software Engineer, and Teaching Fellow has honed my abilities in team leadership, effective communication, and cross-functional collaboration. I am eager to apply these skills in a challenging environment to drive technological advancements and mentor emerging talents in the field of AI/Smart Navigation systems.

Education

- **Queen Marry University of London** — London, UK
  PhD in Computer Science — *June. 2019 – May. 2024*
- **Mehran University of Engineering and Technology** — Jamshoro, Pakistan
  Master of Engineering in Networking; GPA: 3.67/4.00 — *December. 2007 – October. 2010*
- **Mehran University of Engineering and Technology** — Jamshoro, Pakistan
  Bachelor of Engineering in Computer Systems; GPA: 3.45 — *December. 2003 – December. 2008*

Skills

- **Programming Languages**: Python, Nvidia GPU/CUDA Programming with Numba/C++
- **Libraries/Frameworks** : PyTorch, Tensorboard, MLflow, Open3D, Numba, OpenMMLab, Hugging-Face
- **Technologies**: Docker/Apptainer, MQTT/Kafka/Apache Streaming, Apache Spark
- **Tools**: GitHub, DockerHub, Notion, vscode, QTCreator, Wireshark, VSPE(serial port emulator)

Award/Certificates

- **NVIDIA DLI**: Fundamentals of Accelerated Computing with CUDA Python
- **Coursera, University of California San Diego**: Big Data, Version 1 Specialization
- **Coursera, University of Toronto**: Visual Perception for Self-Driving Cars

Experience

- **Queen Marry University of London** — London
  PhD Research — *June 2019 - May 2024*
  - **3D Object Detection for Autonomous Vehicles**: Have been engaged in the development and testing of deep learning models, specifically focusing on Convolutional and Vision Transformer models for 3D object detection. Building and managing data and model pipelines to train and evaluate these models using large datasets such as KITTI and Waymo using OpenMMLab framework. Developing custom cuda kernels and using Distributed Machine Learning techniques for computational efficiency on both local and Cluster GPUs.
  - **Object Detection in Adverse Weather Condition**: Doing research on Adverse Weather Augmentation techniques for robust 3D Object Detection for Level-5 Autonomoy
- **Queen Marry University of London** — London
  Teaching Fellow — *Oct 2021 - Present*
  - **Big Data Processing Module**: Coursework and Lab designing, Managing, and Conducting Lab, Solving student queries, Marking
  - **Principal Of Machine Learning**: Coursework and Lab designing including crowdsourced datasets, Managing, and Conducting Lab, Solving student queries, Marking
  - **MSc Student Supervision**: Supervising MSc Students for their Final Year projects in the domain of Deep Learning and Computer Vision

- **NodeNS** London
  Embedded Software Engineer *2020 and 2021*
  - Creating a Sensor Integration Unit to facilitate on-the-fly connections between mmWave radar sensors and edge devices
  - Formulating and implementing a security protocol to ensure secure communication across the network
  - Identifying and establishing a technology stack for the development team to utilize in their projects
  - Designing and building a graphical user interface tool for efficient data transfer and configuration of sensors

- **Maritime System Limited** Pakistan
  Technical Manager / Software Architecture *Jan 2011 - Sept 2018*
  - **Led and Managed Cross-Functional Teams**: Have managed and Led to complete projects in accordance with ISO 9000 and CMMI (Capability Maturity Model Integration) standards in software engineering.
  - **Real-time Data Acquisition**: Designed and developed software applications for real-time data acquisition, ensuring timely and accurate data processing.
  - **GIS Application Development**: Created GIS applications using QGIS open-source tools for geographical data visualization and analysis.
  - **Packet Filtering and Data Fusion**: Developed applications for packet filtering, data fusion, data correlation, and association using Qt-Creator Framework.
  - **Emulators and Simulators**: Designed emulators and simulators for Hardware system testing, enhancing the quality and reliability of the developed software.
  - **Hardware Sensor Interfacing**: Proficient in interfacing hardware sensors with GUI software for data visualization and real-time monitoring.
  - **Network Communication Protocol Design**: Designed communication protocols for heterogeneous hardware integration, ensuring seamless data exchange between different devices.
  - **Critical Event Management Services**: Contributed to designing Critical Event Management Services for timely notification and response to critical system events toward industrial systems.