Kaiser Hamid

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EDUCATION

Texas Tech University (TTU) **Aug 2024 - Present**
PhD in Industrial Engineering *Lubbock, TX*

Texas Tech University (TTU) **Aug 2024 - Present**
MS in Electrical and Computer Engineering (ECE) *Lubbock, TX*

Bangladesh University of Engineering & Technology (BUET) **Apr 2019 - Jul 2024**
BSc. in Civil Engineering *Dhaka, Bangladesh*

WORK EXPERIENCE

Graduate Research Associate **Aug 2024 - Current**
Autonomous Driving, Computer Vision, Human Factors *Lubbock, Texas*

- **Advisor: Dr. Nade Liang**

Research Associate **Dec 2022 - Jul 2024**
Deep Learning, App Development, Database Management *Dhaka, Bangladesh*

- **Advisor: Dr. Annesha Enam**

TECHNICAL SKILLS

Languages: Python, C, C++, Dart, R, MATLAB
Developer Tools: VS Code, Android Studio
Technologies/Frameworks: GitHub, ReactJS, NodeJS, Git, Mongo, Flutter
Deep Learning Frameworks: TensorFlow, Keras, PyTorch
Libraries: Scikit-learn, Pandas, Numpy, Scipy, OpenCV, Matplotlib, Seaborn
Simulation tool for autonomous driving: CARLA, SCANeR AV

RESEARCH INTERESTS

Autonomous driving, Computer vision, Cyber security, Human factors.

Selected Projects

- **TransAD: End-to-End Autonomous Driving** – Developed a novel transformer-based trajectory prediction framework for autonomous vehicles using multi-modal inputs (cameras, intent, trajectory).
- **CARLA Human-in-the-Loop Simulation** – Built HITL simulation setup integrating steering wheel, pedals, and CAN bus for human participant with level 1 and level 3.
- **Raspberry Pi 4 Data Logger with CAN Bus** – Created a compact embedded system for vehicle data collection and sensor fusion.
- **Pedestrian heterogeneous traffic detection, tracking with Deep Learning** – Trained computer vision models for real-time pedestrian traffic detection using PyTorch and OpenCV.

Publications (Selected)

- **Hamid, K.**, Liang, N. *"A New Evaluation Metric for Takeover Maneuver Quality: Comparing Human Drivers with Autonomous Driving Agents."* Proceedings of the 69th HFES Annual Meeting (ASPIRE 2025).
- **Hamid, K.**, Noor, M. S., Enam, A. *"Assessing the Potential of Google Location History Data for Travel Behavior Research."* Proceedings of the 27th IEEE ITSC (2024).