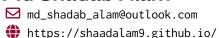
## Md Shadab Alam







## **Employment History**

2023 – Ongoing Researcher Eindhoven University of Technology (TU/e), Eindhoven, The Netherlands

Junior Research Fellow Centre for Industrial Consultancy and Sponsored Research, Chennai, India

2020 – 2021 Lecturer Holy Cross School, India

## **Education**

2023 – Ongoing Ph.D., Eindhoven University of Technology Industrial Design.

Thesis title: Connected data from autonomous vehicles and road users to enhance safety.

2021 – 2023 M.Sc., Indian Institute of Technology (IIT) Madras in Robotics and Artificial Intelligence.

Thesis title: Data driven control for marine vehicle maneuvering.

2016 – 2020 **B.tech.** , **Jamia Millia Islamia** in Mechanical Engineering.

Thesis title: Design of Product Prototype for Inventory Management 4.0.

## **Skills**

Languages English, Hindi, Urdu

Coding Python, C++, C, C#, JavaScript, R, LATEX

Machine/Deep Learning TensorFlow, PyTorch, Google JAX, Scikit-Learn, Keras, CV, Numpy, Pandas,

Transformers, Reinforcement Learning, GANs, Graph Neural Networks

ML Engineering Model Deployment, ML Pipelines, Model Monitoring, A/B Testing

MLOps Docker, Kubernetes, MLflow, DVC, CI/CD for ML

Data Engineering Apache Spark

Data Visualization Matplotlib, Seaborn, Plotly, Dash

Web Development HTML, CSS, JavaScript, Apache Web Server, Tomcat Web Server, Flask,

FastAPI

Robotics ROS, Sensor Integration

Cloud Platforms Amazon AWS (Sagemaker), Google Cloud Platform (GCP), Microsoft Azure

Misc. Unity, Unreal Engine

## **Research Publications**

### **Journal Articles**

M. S. Alam, M. Martens, and P. Bazilinskyy, "Evaluation of pedestrian behaviour in 157 cities with 285 hours of dashcam footage from youtube," *Under Review*, 2024.

- Alam, Md Shadab and I. Carlucho, "Harnessing traditional controllers for fast-track training of deep reinforcement learning control strategies," *Journal of Marine Engineering & Technology*, pp. 1–12, 2024. 
  DOI: https://doi.org/10.1080/20464177.2024.2367276.
- Alam, Md Shadab, V. Deogaonkar, and A. Somayajula, "Enhancing autonomy: Comparative analysis of machine learning-based controllers in extended action states," *Under Review*, Apr. 2024.
- Alam, Md Shadab, M. Martens, and P. Bazilinskyy, "Generating realistic traffic scenarios: A deep learning approach using generative adversarial networks (gans)," *Under Review*, 2024.
- R. Deraj, R. S. Kumar, **Alam, Md Shadab**, and A. Somayajula, "Deep reinforcement learning based controller for ship navigation," *Ocean Engineering*, vol. 273, p. 113 937, 2023. ODOI: https://doi.org/10.1016/j.oceaneng.2023.113937.

## **Conference Proceedings**

- Alam, Md Shadab, T. Subramanian, M. Martens, W. Remlinger, and P. Bazilinskyy, "From a to b with ease: User-centric interfaces for shuttle buses," in *Adjunct Proceedings of the 16th International Conference on Automotive User Interfaces and Interactive Vehicular Applications*, ser. AutomotiveUI '24 Adjunct, Stanford, CA, USA: Association for Computing Machinery, 2024, pp. 111–116, ISBN: 9798400705205. ODI: 10.1145/3641308.3685033.
- Alam, Md Shadab, "Data driven control for marine vehicle maneuvering," Jul. 2023. O DOI: 10.13140/RG.2.2.16194.15045.
- J. Jose, **Md Shadab Alam**, and A. S. Somayajula, "Navigating the ocean with drl: Path following for marine vessels," in *Proceedings of the Sixth International Conference in Ocean Engineering (ICOE2023)*, 2023. ODI: https://doi.org/10.48550/arXiv.2310.14932. arXiv: 2310.14932 [eess.SY].
- Md Shadab Alam, S. K. R. Sudha, and A. Somayajula, "Ai on the water: Applying drl to autonomous vessel navigation," in *Proceedings of the Sixth International Conference in Ocean Engineering (ICOE2023)*, 2023. ODI: https://doi.org/10.48550/arXiv.2310.14938. arXiv: 2310.14938 [eess.SY].

## Miscellaneous Experience

#### **Awards and Achievements**

- Winner at VRX Competition organized by the Office of Naval Research (ONR), Naval Postgraduate School (NPS), and Open Robotics, competing against teams across 5 continents.
  - Winner, Data Analysis Hackathon Competition organized by IEEE Oceans 2022.

### Internship

- Goalwit Technologies. Developed a deep learning model for protecting premium members.
- Guinea Motors Pvt. Ltd. Developed an Inventory management system using Linear Regression and classified the inventory in accordance to Pareto distribution.

### Certification

2022 **IELTS**. Got 7.5 band.

# Miscellaneous Experience (continued)

Introduction to TensorFlow for Artificial Intelligence, Machine Learning & Deep Learning. Awarded by DeepLearning.ai.

### **Other Activities**

**Web Chair**. Appointed web chair for the IEEE conference: https://www.ro-man2025.org/.

Placement Coordinator. Appointed as placement coordinator for masters and PhD students at IIT Madras.