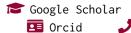
# Md Shadab Alam

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ttps://shaadalam9.github.io/







# **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

## **Education**

2021 - 2023

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, Go, Rust, Latex,

Machine/Deep Learning TensorFlow, PyTorch, CV, Numpy, Pandas, Transformers, NLP, LangChain,

Prompt Engineering, Reinforcement Learning, GANs, Graph Neural Networks

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

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

Data Engineering | SQL, Apache Spark, Hadoop, Snowflake

Data Visualization Matplotlib, Seaborn, Plotly, Dash, Power BI, Excel

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

FastAPI, Heroku

Database Management MongoDB

Robotics ROS, Sensor Integration

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

Misc. Unity, Unreal Engine, Scala

## **Research Publications**

### **Journal Articles**

M. S. Alam, M. Martens, O. Bazilinska, and P. Bazilinskyy, "Understanding global pedestrian behaviour in 565 cities with dashcam videos on youtube," 2025.

- M. S. Alam, V. Deogaonkar, and A. Somayajula, "Enhancing autonomy: Comparative analysis of machine learning-based controllers in extended action states," *Under Review*, Apr. 2024.
- R. Deraj, R. S. Kumar, M. S. Alam, and A. Somayajula, "Deep reinforcement learning based controller for ship navigation," *Ocean Engineering*, vol. 273, p. 113 937, 2023. ODI: https://doi.org/10.1016/j.oceaneng.2023.113937.

## **Conference Proceedings**

- M. S. Alam, M. Martens, and P. Bazilinskyy, "Generating realistic traffic scenarios: A deep learning approach using generative adversarial networks (gans)," 3, vol. 3, AHFE Open Acces, 2025. ODOI: 10.54941/ahfe1005927.
- M. S. Alam, S. H. Parmar, M. H. Martens, and P. Bazilinskyy, "Deep learning approach for realistic traffic video changes across lighting and weather conditions," in *Proceedings of International Conference on Information and Computer Technologies (ICICT)*, Hilo, HI, USA, 2025.
- P. Bazilinskyy, M. S. Alam, and R. Merino-Martinez, "Pedestrian crossing behaviour in front of electric vehicles emitting synthetic sounds: A virtual reality experiment," in *Proceedings of InterNoise*, 53rd International Congress & Exposition on Noise Control Engineering, Sao Paulo, Brazil, 2025.
- P. Bazilinskyy, M. S. Alam, and R. Merino-Martinez, "Psychoacoustic assessment of synthetic sounds for electric vehicles in a virtual reality experiment," in *Proceedings of 11th Convention of the European Acoustics Association (Euronoise)*, Malaga, Spain, 2025.
- M. S. Alam, 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.

  \*\*DOI: 10.1145/3641308.3685033.
- M. S. Alam, "Data driven control for marine vehicle maneuvering," Jul. 2023. O DOI: 10.13140/RG.2.2.16194.15045.
- M. S. Alam, S. K. Ramkumar 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].
- J. Jose, M. S. 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.

  DOI: https://doi.org/10.48550/arXiv.2310.14932.arXiv: 2310.14932 [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.

# Miscellaneous Experience (continued)

Winner, Data Analysis Hackathon Competition organized by IEEE Oceans 2022.

### Reviewer

- NeurIPS Appointed as NeurIPS conference reviewer.
  - International Journal of Control, Automation, and Systems Reviewed one journal paper in International Journal of Control, Automation, and Systems Journal.
  - **Journal of intelligent & robotic systems** Reviewed one journal paper in Journal of intelligent & robotic systems Journal.
  - Ocean engineering Reviewed five journal paper in Ocean engineering Journal.
  - Engineering Applications of Artificial Intelligence Reviewed one journal paper in Engineering Applications of Artificial Intelligence Journal.

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

### **Other Activities**

- 2024 2025 **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.