Muhammad Jehanzeb Mirza

Curriculum Vitae

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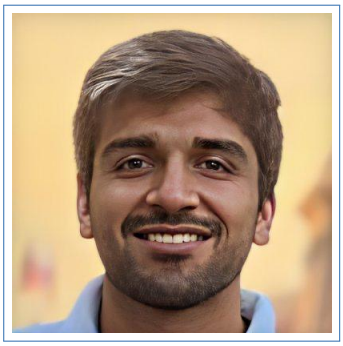

Personal Data

Name	**Muhammad Jehanzeb Mirza**.
Year of Birth	**1996**.
Nationality	**Pakistani**.

Education

2021

Computer Science (Computer Vision), *PhD. Student*, Graz University of Technology, Graz, Austria.

Research Domain: Dynamic Adaptation to Distribution Shifts in an unsupervised manner. Particularly, I focus on leveraging learned representations by the pre-trained networks and adapt them to unknown conditions/distributions at test-time in an online manner. One interesting use case for my research is Autonomous Driving in adverse weather conditions.

2017 – 2020

Electrical Engineering and Information Technology, *Masters*, Karlsruher Institut für Technologie, Karlsruhe, Germany.

Master Thesis at Intel Labs Germany: Evaluation of Robustness of Muti-Modal Object Detectors in Challenging Weather conditions using Deep Neural Networks.

2013 – 2017

Electrical Engineering, *Bachelors*, National University of Science and Technology, Islamabad, Pakistan.

Bachelor Thesis: Wateran - Water Quality Monitoring System involving Machine Learning to predict safe range of parameters for drinkable water.

Technical Skills

Programming Languages	Python, C++
Deep Learning Libraries	PyTorch, TensorFlow, Keras, Scikit-learn
Github Profile	https://github.com/jmiemirza

Work Experience

2021 **Project Assistant**, ***Graz University of Technology***, Jan 2021 - Present.
Working on designing self-supervised learning algorithms for making present day deep neural networks robust to distribution shifts and domain shifts.

2020 **Master Thesis**, ***Intel Labs Germany***, Jan 2020 - Jul 2020.
Worked on evaluating the robustness of state of the art Multi-Modal object detection systems in challenging weather conditions using Deep Neural Networks.

2019 **Internship**, ***Intel Labs Germany***, Oct 2019 - Dec 2019.
Worked on track-to-track fusion and the development of interactive multi-model kalman estimator in C++ and by using OpenCV extensively.

2019 **Internship**, ***Intel Germany***, Mar 2019 - Aug 2019.
Developed an automated framework for remote access to customer boards by designing the hardware and integrating it with the GUI design using Python.

2019 **Working Student**, ***EnBw- Energy Baden Württemberg***, Jan 2019 - Feb 2019.
Researched about how to make stable and reliable single channel LoRa gateways.

2018 **Student Researcher**, ***Forschungszentrum Informatik***, Mar 2018 - Nov 2018.
Worked with GUI development, Eclipse Modelling and Raspberry Pi development.

Publications (Lead Author)

CVPR (2022) The Norm Must Go On: Dynamic Unsupervised Domain Adaptation by Normalization.

CVPR (2022) An Efficient Domain-Incremental Learning Approach to Drive in All Weather Conditions.

ITSC (2021) Robustness of Object Detectors in Degrading Weather.

Languages

English Proficient C1

German A1

Punjabi Mother Tongue

Urdu Bi-Lingual

References

PhD. Supervisor - Graz University of Technology: Prof. Dr. Horst Bischof (bischof@icg.tugraz.at)

PhD. Advisor - Graz University of Technology: Dr. Horst Possegger (possegger@icg.tugraz.at)