Shehryar Malik

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https://shehryar-malik.github.io/
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Objective

To understand and express intelligence mathematically – which is the ultimate objective of the field of artificial intelligence.

Education

Lahore University of Management Sciences, Lahore September 2019 – May 2021
Masters of Science • Computer Science

University of Engineering and Technology, Lahore August 2015 – May 2019
Bachelor of Science • Electrical Engineering

Aitchison College, Lahore August 2013 – May 2015
A Levels

Work Experience

Research Assistant July 2019 – Present
Center of Artificial Intelligence and Computational Science,
Information Technology University, Lahore.
Research Advisor: Dr. Ali Ahmed.

Research Intern July – September 2018
Centre for Language Engineering,
Khwarizmi Institute of Computer Science, Lahore.

Research Intern July – August 2018
Bio-Inspired Simulation and Modelling of Intelligent Life Laboratory,
Information Technology University, Lahore.

Research Intern May – August 2017
Internet of Things Laboratory,
Khwarizmi Institute of Computer Science, Lahore.

Publications

S. Malik, U. Anwar, A. Ahmed, and A. Aghasi. Learning to solve differential equations across initial conditions. In *ICLR 2020 Workshop on Integration of Deep Neural Models and Differential Equations*, 2020. URL arxiv.org/abs/2003.12159

Projects

Urdu Handwriting Recognition using Deep Learning September 2018 – May 2019
Senior Project • Advisor: Dr. Ubaid Ullah Fayyaz

- Prepared a dataset containing 15,164 lines of Urdu handwritten text written by 490 different writers and containing 13,497 trigrams, 1,674 bigrams and 61 unigrams.
- Implemented and trained a simple CNN-LSTM-CTC architecture and a more complicated Bahdanau attention-based architecture in TensorFlow.
- Incorporated a trigram-based language model with Backoff Kneser-Ney smoothing.
- Achieved accuracies of up to 91% on the test set.
- For more details, visit https://shehryar-malik.github.io/theses/sp.

Skills

- Programming languages: Proficient in Python, MATLAB, LaTeX and Markdown. Have also used/studied C, Java, Verilog, Assembly, HTML, CSS, PHP and SQL occasionally.
- Natural Languages: Proficient in English and Urdu. Have a (very) rudimentary understanding of French and Arabic.
- Libraries: Extensively used NumPy, TensorFlow and Matplotlib.

Selected Courses

Artificial Intelligence and Machine Learning

- Deep Multi-Task and Meta Learning (Stanford CS 330) [on-going]
- Deep Reinforcement Learning (UC Berkeley CS294-112)
- Natural Language Processing with Deep Learning (Stanford CS224n)
- Convolutional Neural Networks for Visual Recognition (Stanford CS231n)
- Machine Learning (Stanford CS229)
- Introduction to Artificial Intelligence (MIT 6.034)

Mathematics

- Convex Optimization [on-going]
- Probability and Statistics

Signal Processing

- Analog and Digital Communications
- Digital Signal Processing
- Signals and Systems