Haseeb **Shah**

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Education ─────────────────────────────

NUST(National University of Science and Technology)   *nust.edu.pk*
Bachelors of Engineering in Software Engineering   *Sep. 2015 - Jul. 2019 (expected)*
CGPA: 3.69/4.00

Research Papers ─────────────────────────

H. Shah, J. Villmow, A. Ulges, U. Schwanecke, F. Shafait. "An Open-World Extension for   *haseebshah.io/papers/owe*
Knowledge Graph Completion Models". Accepted to AAAI-2019 (16.4% acceptance rate)
Hoschule RheinMain University of Applied Sciences, Germany   *Jun. 2018 - Sep. 2018*
Current Knowledge Graphs Completion (KGC) models are incapable of predicting facts about entities unknown to them. I proposed an extension that enables any existing KGC model to predict these facts. This approach is more robust to scarce descriptions in the data, more portable across different KGC models and has better performance than the published state of the art on most datasets. I also released a new dataset that overcomes the shortcomings of previous ones.

H. Shah, K. Javed, F. Shafait. "Distillation Techniques for Pseudo-rehearsal Based   *haseebshah.io/papers/incremental*
Incremental Learning". 2018
TUKL-NUST Research and Development Center, Pakistan   *Feb. 2018 - May 2018*
Standard neural networks suffer from catastrophic forgetting when they are trained on incrementally arriving stream of IID data. To combat this forgetting, one approach is to train GANs on previously arrived data and feed it to the network again. In this paper I show that such techniques are biased and propose a framework to mitigate this bias and reduce the effect of catastrophic forgetting using AC-GANs.

Selected Projects ───────────────────────

Retrieval of Visually Similar Garment Images   *haseebshah.io/projects/garment*
Python │ Tensorflow   *June 2017*
The purpose of this system is to return a set of visually similar images of clothing given an image that contains a clothing item. I adapted the techniques used in face recognition to this problem and achieved a performance that beats the published state of the art in this domain.

WikiHunt: Wikipedia Search Engine   *haseebshah.io/projects/wikisearch*
Ruby │ MySQL │ Sinatra │ HTML │ CSS   *Dec. 2016*
Implemented a scalable search engine capable of returning relevant results quickly for a database with more than 100,000 documents on a regular computer. It involved generation of forward and inverted indices and calculating the IR scores to get relevent results. The implementation was profiled and optimized for performance.

Photron Image Translator   *haseebshah.io/projects/photron*
C# │ XAML   *Dec. 2015*
Windows 10 Universal application (Desktop + phone + Xbox + Hololens) that takes an image as an input, extracts the text from it using OCR and translates the text to the desired language. *It has more than 25,000 downloads to date.*

Volunteer Experiences ──────────────────

2018   **Teaching Assistant**, Data Structures and Algorithms
2018   **Teaching Assistant**, Computer Networks
2016   **AIESEC**, Branding and Communications team

Honors & Awards ──────────────────────

2018	**Nominated**, DAAD funded research in Germany	*Germany*
2016	**Winner**, ACM GIKI Softcom Photoshop Design Competition	*Pakistan*
2016	**Bronze Medal**, Hackerrank Week of Code 26	*International*
2016	**ROYAL App of the Day**, Adduplex Awards	*International*

Online Courses

2017	**David Silver**, Introduction to Reinforcement Learning (along with Richard Sutton's RL book)
2017	**Stanford**, CS231n (CNNs for visual recognition)
2017	**Caltech**, Learning from Data (Machine Learning Theory)
2016	**Rich Radke**, Digital Image Processing
2016	**Andrew Ng**, Machine Learning