ASIF KHAN

Ph.D. Student in Machine Learning

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RESEARCH EXPERIENCE

Research Intern
Huawei Research London

September 2021 - December 2021 | London, UK

Supervisor: Dr. Haitham Bou-Ammar

Worked on trust region combinatorial **Bayesian optimisation** with application to antibody sequence design.

Research Intern
Sony Stuttgart Technology Center

March 2019 - August 2019 | Stuttgart, Germany

Supervisor: Dr. Fabien Cardinaux

Developed a **generative adversarial network** for unsupervised speech-to-speech conversion.

Research Assistant
Smart Data Analytics, University of Bonn

Oct 2017 - Sept 2018 | Bonn, Germany

Supervisor: Prof. Jens Lehmann Developed a **neural network** model to combine numerical and relational triples for improving **link prediction** in **knowledge graphs**.

Research Assistant
Bio-Ontology Research Group, KAUST

Jan 2016 – May 2017 | Jeddah, Saudi Arabia

Provided machine learning expertise for solving Life Science problems.

- Developed an ontology aware **hierarchical neural network** to predict Gene Ontology (GO) function from protein sequences.
- Developed a novel method for **representation learning** of nodes and relations in biological **knowledge graphs**.

Research Intern
Rapid Rich Object Search Lab, Nanyang Technological University

May 2015 - July 2015 | Singapore

Supervisor: Prof. Alex Kot

Developed deep **convolutional neural networks** for fine-grained classification of visually similar handbags.

PUBLICATIONS

- **Asif Khan**, Amos Storkey, Hamiltonian prior to Disentangle Content and Motion in Image Sequences.In CtrlGen Workshop NeurIPS 2021.
- A Kukleva*, **M Asif Khan***, H Farazi, and S Behnke, Utilizing Temporal Information in Deep Convolutional Network for Efficient Soccer Ball Detection and Tracking. In RCS 2019. (* **Equal Contribution**)
- A Kristiadi*, **M Asif Khan***, D Lukovnikov, J Lehmann, A Fischer, LiteralE: Incorporating literals into knowledge graph embeddings. In ISWC, Springer 2019. (* **Equal Contribution**)
- M Kulmanov, **M Asif Khan**, R. Hoehndorf, DeepGO: Predicting protein functions from sequence and interactions using a deep ontology-aware classifier. In Bioinformatics 2017, pp. 660-668.
- Other Publications

RESEARCH INTERESTS

- Generative models & Bayesian Inference.
- Physics priors in deep neural networks.
- Graph representation learning and generative models.

EDUCATION

Ph.D., Machine Learning
University of Edinburgh, UK

2019 – Present, Advisor: Prof. Amos Storkey

MSc., Computer Science
Excellent. GPA: 1.1 (best: 1.0, worst: 5.0)

University of Bonn, Germany

2017 – 2019, Advisor: Prof. Asja Fischer

BTech., Electronics and Communication *GPA: 8.94/10.0*
LNM Institute of Information Technology, India

2012 – 2016, Advisor: Prof. R. Gangopadhyay

SKILLS

Python | C | SQL | SPARQL | MATLAB | Pytorch | Tensorflow | Sklearn | Probabilistic Modeling | Deep Learning | Dynamical Systems | Geometric Deep Learning | Signal Processing

REVIEWING

ICLR 2022 (Highlighted Reviewer), AISTATS 2022 (Top Reviewer), ML4PS Workshop NeurIPS 2021.

TEACHING

University of Edinburgh
Oct 2019 – Present

- Tutor and Marker for Probabilistic Modeling and Reasoning
- Marker for Machine Learning Practical
- Marker for Introductory Applied Machine Learning
- Marker for Data Mining and Exploration

University of Bonn
Oct 2017 – Feb 2019

- Teaching Assistant for Knowledge Graph Analysis

LNM Institute of Information Technology
Fall 2013 – Fall 2015

- Teaching Assistant for C Programming Lab
- Teaching Assistant for Digital Signal Processing Lab