

Muneeb Aadil

Curriculum Vitae

Room 3.12, Building E1 7
Exploratory Data Analysis, CISPA
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Education

2019 – **Masters in Computer Science**, *Universität des Saarlandes (UdS)*, Saarbrücken, Germany.
Present Funded via *International Max Planck Research School (IMPRS)* Scholarship.
Grade: 1.3/1.0

2014 – 2018 **Bachelors in Computer Science**, *National University of Computer and Emerging Sciences (NUCES)*, Islamabad, Pakistan.
CGPA: 3.77/4.0, Rank: 4/300. (**Magna Cum Laude**)

Research Experience

Aug '20 – **Research Assistant**, *Exploratory Data Analysis (EDA)*, CISPA Helmholtz Center for Information Security, Saarbrücken, Germany.
Present Advisor: Dr. Jilles Vreeken

- **Online Causal Inference.**

Aug '17 – **Undergrad Research Assistant**, *reveal.ai group*, NUCES, Islamabad, Pakistan.
Aug '18 Advisor: Dr. Sibte ul Hussain

Mar '19 – ○ **Face Detection/Recognition.**

- **Single Image Super-Resolution [2,3].** [Paper](#) | [Code](#)

Publications

- [3] **M. Aadil**, R. Rahim, S. u. Hussain. “Improving Super Resolution Methods via Incremental Residual Learning.” In: *IEEE International Conference on Image Processing (ICIP)*, 2019.
- [2] R. Timofte, . . . , S. u. Hussain, **M. Aadil**, . . . , L. Fu. “NTIRE 2018 Challenge on Single Image Super-Resolution: Methods and Results.” In: *IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, 2018.

Technical Reports

- [4] M. Yaseen*, **M. Aadil*** and M. Sargsyan*. “Preventing Clean Label Poisoning using Gaussian Mixture Loss.” 2020.
- [1] **M. Aadil** and S. u. Hussain. “Line Detection using Convolutional Neural Networks.” 2017.

Notable Projects

Winter '19 **Preventing Clean Label Poisoning using LGM [4]**, *ML in Cybersecurity*.

I, along with fellow members, showed that one can make it difficult for clean label poisoning algorithm to work, if we enforce a pretrained model to follow a known prior distribution *i.e.* Gaussian Mixture Models.
[Report](#) | [Code](#)

Spring '18 **Structure from Motion**, *Undergrad Final Year Project*.

Wrote an end-to-end incremental SfM pipeline code for plug-and-play purposes and developed interactive code exercises for learning purposes. The project has now gotten a little bit of attention on GitHub.
[Code](#)

Fall '17 **Line Detection using Convolutional Neural Networks [1]**, *Deep Learning for Perception*.
Trained CNNs to detect lines in a binary image to overcome limitations of standard Hough Transform. The promising results prove that line detection in natural images using CNNs is a direction worth exploring.
[Report](#) | [Code](#) | [Slides](#)

Teaching Experience

Winter '20 **Tutor**, *Elements of Machine Learning*, by Prof. Jilles Vreeken and Prof. Isabel Valera.

Selected Accolades

Sep '19 **IMPRS-CS Scholarship** (6 awardees globally) for MSc Winter'19 program at UdS.
Apr '18 **Invitation for Co-authoring** NTIRE 2018 Challenge Report at CVPR'18 Workshop.
Apr '18 **Featured in NUCES Graduate Directory High Achievers**.
Mar '18 **1 Bronze, 1 Gold Medal** for Fall '17 and Spring '18 Semester, respectively.

Technical Skills

Advanced | **Intermediate** | **Basic**

Languages Python | C/C++ | MATLAB/Octave

Frameworks PyTorch, Scipy | Tensorflow, Keras, OpenCV

Others Git | Unix, L^AT_EX | SSH

Languages

English (Proficient), Urdu (Native)