Jane Doe

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SUMMARY

With around 4 years of academic and industrial experience with various applications of machine learning on different data modalities, I am hoping to pursue a doctorate in applications of technology and machine learning for social good.

PUBLICATIONS

- [2020] **Hyperlinked Publication 1 Title**
  arXiv
  Main contributions: Dataset compilation and annotation, experimentation with various CNN architectures, writing the complete paper
- [2019] **Hyperlinked Publication 2 Title**
  Ecological Informatics
  Main contributions: Reannotation of the dataset, experimentation with various background subtraction methods including CNNs and mixture models, writing the literature review and method section of the paper
- [2018] **Hyperlinked Publication n Title**
  IEEE Transactions on Circuits and Systems for Video Technology
  Main contributions: Entire deep learning part of the paper from literature review to programming to writing

EDUCATION

Robotics and AI, Master - 2018

The University - Islamabad, PK - **GPA:** 4.00/4.00
Thesis Hyperlinked thesis title
Achievements
- Awarded some scholarship
- Awarded some medal

Mechanical Engineering, Bachelor - 2014

The University - Islamabad, PK - **GPA:** 3.58/4.00
Thesis Non-hyperlinked final project or thesis title

ACADEMIC EXPERIENCE

Python Developer / Mar 2018 - Feb 2019

The LHC - Geneva, CH

• Prototyped, evaluated, and integrated a 3-class publication classifier. It uses title, abstract, as well as Core and Non-Core first order and second order reference fractions as input and is based on the ULMFiT text classifier

• Evaluated and integrated the improved reference matcher based on ElasticSearch queries

• Partially integrated the hierarchical clustering based author disambiguation module. The module uses features derived from author name, affiliations, and the paper title

Recurrent Neural Networks | Convolutional Neural Networks | Hierarchical Clustering | Data Analysis | Python

Graduate research student / Aug 2016 - Oct 2017

Some Lab - Islamabad, PK

• Worked on fish detection and classification in challenging underwater environments using both conventional and deep learning techniques

• Achieved state of the art 84.5 mean Average Precision on the Fish4Knowledge dataset using Gaussian Mixture Models augmented with Pixel-Wise Posteriors

• Designed and manufactured apparatus for underwater video capture in freshwater reservoirs in Pakistan for data

collection

Convolutional Neural Networks | Design and Manufacturing | Python

Summer Student / Jun 2017 - Sep 2017

The LHC - Geneva, CH

- Configured and simulated runs of different detector-particle beam interactions
- Added a more robust track reconstruction algorithm (General Broken Lines) to the Proteus framework

C++

Teaching Assistant / Sep 2016 - May 2017

Some University - Islamabad, PK

- Helped teach these courses: X (Fall 2017), Y (Fall 2016)
- Did some other stuff

Teaching

INDUSTRIAL EXPERIENCE

Co-Founder / Oct 2019 - Mar 2021

Some Startup - Islamabad, PK

- Carried out a review of existing literature
- Carried out market research to understand the current products
- Came up with some proposition
- Designed an academically rigorous pilot study to help us validate or invalidate our above listed hypothesis
- Awarded some prize

Literature Review | Market Research | Pilot Study

AI Guy / Oct 2020 - Dec 2020

Cool Company - Islamabad, PK

- Led 4 different projects with both AI and software development components
- Came up with a pilot study to help us evaluate the concordance in our methods
- Introduced a hybrid Scrum-Kanban and agile development practices for better software development

Pilot Study | Convolutional Neural Networks | Detection | Semantic Segmentation | Python | APIs

Machine Learning Engineer / Nov 2019 - Jul 2020

Smart Cart Co - Islamabad, PK

- Researched novel approaches for large scale, yet fine grained visual classification
- Enhanced code readability and performance by redesigning and implementing it in modules

Convolutional Neural Networks | Detection | Classification | Python | C++

Design Engineer / Feb 2017 - May 2017

Design Company Co - Islamabad, PK

- Trained Convolutional Neural Networks for fine-grained vehicle detection and classification on motorways
- Achieved above 88 % accuracy over fine categories and above 95 % accuracy over toll-wise categories
- Implemented a Kalman Filter for smoothing vehicle detections, tracking, and to aid in vehicle counting

Convolutional Neural Networks | Detection | Classification | Tracking | Python

SKILLS

Programming Languages: Python, C++, C, JavaScript, Bash
Markup Languages: HTML, CSS, Markdown, LaTeX
Tools: PyTorch, Keras, OpenCV, NumPy, Pandas, Flask, PyTest, Docker, MQTT, Jenkins, Terraform
Other: Literature review, Market research, Documentation, CI/CD, Version Control, Web, Data science and ML, Cloud

computing, CAD

EXTRACURRICULARS

- Attended the MIT Center for Brains, Minds, and Machines (CBMM) Summer Course 2020
- Attended Neuromatch Academy 2020, a 3-week digital summer school in Computational Neuroscience, as an interactive participant
- Volunteered at the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2018
- Attended the International Conference on Machine Learning (ICML) 2018
- Attended the Human Brain Porject (HBP) workshop on Neurobiology for non-specialists in 2017
- Community Mentor for the Machine Learning Foundations course by University of Washington on Coursera in 2016
- Attended the Effective Altruism Student Summit 2020
- Attended Impact Summit 2020, a 3-day conference on the intersection of technology and social good
- Attended EAGxVirtual 2020, the Effective Altruism Global digital conference

STANDARDIZED TEST SCORES

GRE | 320

Quantitative: 165
Verbal: 155
AWA: 4.0
Test Date: 20th Dec 2019

TOEFL iBT | 108

Reading: 27
Listening: 27
Speaking: 27
Writing: 27
Test Date: 25th November 2019