Muhammad Khizar Anjum

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Github: https://www.github.com/khizar-anjum

OBJECTIVE

PhD student at Rutgers. Curious, hard-working and hands-on learner. Looking for internship opportunities where I can apply skills and contribute to real-world projects.

EDUCATION

Rutgers University, New Brunswick, NJ, USA
PhD student, Electrical and Computer Engineering (ECE)
2019 - present CGPA: 4.00/4.00

Lahore University of Management Sciences (LUMS), Lahore, Pakistan
Bachelor of Science (BS), Electrical Engineering(EE)
Gold Medalist, 2015 - 2019 CGPA: 3.86/4.00

Punjab College, Okara, Pakistan
Class XII Higher Secondary Examination
2013 - 2015 Aggregate 91.1%

TECHNICAL SKILLS

Languages: Python, C++, MATLAB, HTML, PHP, MySQL
Industry Knowledge: Machine Learning, Digital Signal Processing, Artificial Intelligence (AI), Image Processing, Deep Learning
Skilled in: Jupyter, PyTorch, TensorFlow, ROS, Pandas, GNU Radio, Linux, OpenCV
General: Approximate Computing, Data Science, Machine Vision, Natural Language Processing (NLP), Reinforcement Learning

EMPLOYMENT HISTORY

Self-Employed Machine Learning Free-Lancer **July 18 – Aug. 19**
Developed solutions for clients in the field of Machine Learning and Natural Language Processing. Some of the projects undertaken include Text Summarization, Data Mining, Sentiment Analysis and Signature Verification and Extraction.

Back-end Developer at Black Collective, Lahore, Pakistan
Sept. 17 – Apr. 18
Handled back-end services for websites by using databases such as MySQL and MongoDB. Major backend operations were processed and embedded in HTML using PHP.

Summer Intern at Dogar Publishers, Lahore, Pakistan **Apr. 17 – Aug. 17**
Worked as a content developer in the summer for a Dogar Publishers.

ACADEMIC EXPERIENCE

Graduate Assistant at Rutgers **Dec. 19 – Present**
Working at Cyber-Physical Systems Laboratory (CPS Lab) Rutgers under the supervision of Prof. Dario Pompili.

Teaching Assistant at Rutgers **Sept. 19 – Dec. 19**
Teaching Assistant for Linear Signals and Systems by Prof. Anand Sarwate.

Research Assistant at LUMS **June 18 – May 19**
Research Assistant for Electrical Engineering Department. Final year project thesis details can be found under: khizar-anjum.github.io/projects/2019/05/parkinsons/

Organizer of Summer Research Program at LUMS **June 18 – Aug. 18**
Helped organise a training program for UnderGraduate students to fimiliarize them with basic concepts in Signal Processing and Machine Learning in order to jumpstart their research in this field.

Teaching Assistant at LUMS **Aug. 17 – May 18**
Worked as a Teaching Assistant for 3 different courses in this time period:

- Signals and Systems - EE 310
- Circuits 2 - EE 241
- Intro to Engineering Modelling - EE 241

PROJECTS

Deep Multi-Agent RL for 3D Reconstruction **Sept. 19 – Dec. 19**
Worked on multi-agent reinforcement learning algorithm to guide flying drones navigate a scene and reconstruct 3D model.

- **Link:** khizar-anjum.github.io/projects/2019/12/3drecon/

Signature Extraction and Verification **June 19 – Aug. 19**
Worked on signature extraction and verification from documents using Siamese Convolutional Neural Networks and OpenCV.

- **Link:** khizar-anjum.github.io/projects/2019/08/signature-extraction/

Deep Neural Networks for Early Diagnosis of Parkinson's Disease
June 18 – May 19
Analysis of Smartphone Parkinson's disease data released by Sage Bionetworks to train neural networks to use for early detection of Parkinson's.

- **Link:** khizar-anjum.github.io/projects/2019/05/parkinsons/

PUBLICATIONS

P. Pandey, K. Anjum, and D. Pompili. Online object detection on resource-constrained mobile robots via approximate computing. 2020 (in progress)

K. Anjum, V. Sadhu, and D. Pompili. Self-supervised experience-based learning techniques for mobile robots. 2020 (in progress)

RELEVANT COURSES

- Machine Vision
- Introduction to Data Science
- Deep Learning
- Digital Signal Processing
- Computer Networks
- Machine Learning for IOT
- Machine Learning and Information Theory
- Stochastic Systems
- Advanced Digital Signal Processing
- Convex Optimization

HONORS AND AWARDS

TA Achievement Award of the Year at Rutgers, 2020

National Management Foundation (NMF) **Gold Medal** Award at Lahore University of Management Sciences (LUMS)

Dean's Honor List at LUMS, 2019

Dean's Honor List at LUMS, 2018

Dean's Honor List at LUMS, 2017

Dean's Honor List at LUMS, 2016

National Outreach Program (NOP) Scholarship Award for study at LUMS

Merit-based Excellence Scholarship Award at Punjab College, Okara

Shahbaz Sharif Youth Scholarship Award, 2014