Aizaz Sharif

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EDUCATION

Ph.D. Computer Science Simula Research Laboratory, Norway	February 2020-To Date
M.Sc. Computer Science NUCES, Pakistan – GPA: 3.61/4.00	August 2017-July 2019
Deep Learning Nanodegree Udacity	January 2017-July 2017
B.Sc. Computer Science NUCES, Pakistan – GPA: 3.84/4.00	August 2012-May 2016

PUBLICATIONS

Adversarial Deep Reinforcement Learning for Trustworthy Autonomous Driving Policies (Submitted)	February 2022
Robustness of autonomous driving with deep reinforcement learning: A comparative analysis (Submitted)	February 2022
DeepOrder: Deep Learning for Test Case Prioritization in Continuous Integration Testing (Published)	September 2021

- **Conference:** 37th International Conference on Software Maintenance and Evolution (ICSME), Luxembourg

Function Identification in Android Binaries Using Deep Learning (Published)	January 2020

- **Conference:** 7th International Symposium on Computing and Networking (CANDAR), Nagasaki

Android Malware Detection through Generative Adversarial Networks (Published)	July 2019

- **Journal:** Transactions on Emerging Telecommunications Technologies

WORK EXPERIENCE

Simula Research Laboratory, Norway – Ph.D. Researcher   February 2020-To Date
- Thesis Title: Testing of Autonomous Cars
- Joined as a Ph.D. Researcher in the 'Department of Validation Intelligence for Autonomous Software Systems'.
- Currently involved in research areas related to testing autonomous driving models in single and multi-agent simulated environments.
- Using deep reinforcement learning for evaluating their robustness as autonomous and adversarial driving agents.

National Center for Cyber Security (NCCS), Pakistan – Research Associate   February 2019-January 2020
- Lead a small team of software developers for the 'Mobile Phone Digital Forensics' toolkit.
- Learned Mobile Forensic concepts in 2 months and highlighted the challenges faced during the criminal investigations.
- Implemented a Python based Flask backend for REST API calls of the user interface and SQLite for Android device databases.
- Constructed a web application for the acquisition, analysis, and reporting of Android devices for criminal investigation
- Maintained a Software workflow that was released to the authorities for beta testing.

NUCES, Pakistan – Research Assistant   September 2017-February 2019
- Worked under 'Colab' Research group for the campus.
- Involved in research areas related to GANs, Android Malware Detection, Graph Theory, and Medical Imaging.
- Co-wrote and published a paper in 'Transactions on Emerging Telecommunications Technologies' Journal.

DCUBE Technologies, Pakistan - Software Engineer   April 2017-June 2017
- Worked under the 'Product Innovation and Strategy' team.
- Integrated state-of-the-art OCR libraries in 1 month to an ongoing C++ based large scale library for live deployment.
- Increased the accuracy of the OCR prediction by 10% along with performance optimization.
- Gained skills in OCR Pipeline, Python Linux Shell Scripting, Computer Vision and Deep Learning.

Techlogix, Pakistan – Software Engineer   October 2016-April 2017
- Worked as a Software Engineer for the implementation and support of FLEXCUBE which is Oracle's Universal Banking Solution.
- Implemented a workflow using PL/SQL for a smooth migration process from old to the proposed Oracle Solution under strict deadlines.
- Provided continuous support to the migrated system for running daily ongoing transactions with ease.

TECHNICAL SKILLS

Programming Languages: JAVA, C++/C, Python, JavaScript, Go, Bash
Machine Learning: Supervised Learning, Generative Models, Deep Learning, NLP, Deep Reinforcement Learning
Tools/Libraries: PyTorch, OpenCV, Tensorflow, Keras, Ray RLlib, Carla, Gym, NodeJs, Git, CUDA, Flask

KEY PROJECTS

DeepOrder: Deep Learning for Test Case Prioritization in Continuous Integration Testing (GitHub)	August 2021
Handwriting Generation using Recurrent Neural Networks (GitHub)	June 2018
Bron Kerbosch Algorithm (GitHub)	May 2018
Search and Sample Return (GitHub)	September 2017

KEY ACHIEVEMENTS & AWARDS

CANDAR Outstanding Paper - CANDAR'19 Seventh International Symposium on Computing and Networking, Japan	November 2019
1x Bronze Medal - NUCES, Pakistan	October 2019
7x Gold Medals and 1x Silver Medal - NUCES, Pakistan	August 2012-May 2016
7x Deans List and 1x Rector List Certifications - NUCES, Pakistan	August 2012-May 2016