

Curriculum vitae

Informazioni personali

Nome Cognome: Saira Bano

Nazionalità: Pakistana

Lingue conosciute: Inglese (fluente), Italiano (base), Hindi (fluente)

Esperienza lavorativa

Nov 2020 – Oct 2024

Research Associate, ISTI-CNR – Pisa, Italia

- EU-funded Project TRANTOR: Developed a Noise Resistant Traffic Generator using generative models. Developed a federated model for estimating channel parameters between terrestrial and non-terrestrial networks.

- EU-funded Project TEACHING: Developed and configured Customer Premise Equipment with Raspberry Pi for FL network emulation. Developed an AIaaS toolkit for assessing driver stress using facial and sensor data. Configured MQTT, Node-RED, Influx DB, and Grafana.

Feb 2017 – Sep 2017

- ESA Project SatNEX: Developed an online traffic classification model using decision trees, random forests, and neural networks.

Feb 2017 – Sep 2017

Lab Engineer, UET – Taxila, Pakistan

- Managed lab work for undergraduate courses in VLSI and Digital System Design.

Sep 2015 – Jan 2017

Lab Engineer, UET – Taxila, Pakistan

- Managed lab work for undergraduate courses in VLSI and Digital System Design.

Research Associate, COMSATS University – Islamabad, Pakistan

- Supported lab work in Microprocessors, Computer Organization, and Digital Logic Design courses

Istruzione e formazione

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|---------------------|--|
| Nov 2020 – Mar 2024 | Doctor of Philosophy in Information Engineering, University of Pisa, Italy
Thesis: Distributed Artificial Intelligence for the Internet of Things
Supervisors: Prof. Nicola Tonellotto, Dr. Alberto Gotta |
| Oct 2017 – Jul 2020 | Master of Science in Communications and Computer Networks Engineering, Politecnico di Torino, Italy
Thesis: Experimental analysis of 802.11p boards on real vehicles
Supervisors: Prof. Claudio Ettore Casetti, Dr. Gianluca Rizzo
Grade: 104/110 |
| Jan 2011 – Jul 2015 | Bachelor of Science in Computer Engineering, University of Engineering and Technology, Taxila, Pakistan
Final Year Project: Wireless Transmission of ECG signals using Zigbee.
Supervisor: Dr. Muhammad Awais Azam
GPA: 3.57/4.00 |

Competenze e conoscenze professionali

Competenze organizzative:

- Coordinamento di attività di ricerca e gestione di toolkit complessi in progetti internazionali (TRANTOR, TEACHING, SatNEX).

Competenze tecniche:

- AI/ML: neural networks, deep learning, federated learning, dimensionality reduction, classical ML, multimodal classification, GANs, VAEs, knowledge distillation, decision trees, regression.

- Data Analysis: statistical data analysis, data cleaning, normalization, transformation, visualization, predictive analytics.

- Networking: information-centric networks, communication efficiency analysis, optimization, B5G networks, Non-terrestrial Networks.

- Tools: TensorFlow, Keras, PyTorch, Anaconda, SciKit, MATLAB, Kafka, MQTT, Grafana, Node-Red, InfluxDB, OpenFace.

Programming: Python, C/C++, Verilog, VHDL, MIPS, Assembly

Formazione specialistica

- Machine Learning, Sustainable Edge Computing and Networking – Topics: Federated/Decentralized Learning, Reservoir Computing, Pervasive AI, Continual Learning, GNNs, GANs

- 5G: Enabling Technologies and Research Challenges – Topics: AI for 5G, UAVs, Non-Terrestrial Networks, Cloud/Edge Computing
- Satellite 6G: Challenges and Solutions – Topics: NTN architecture, 6G use cases, QoS/QoE, Satellite IoT

Premi e riconoscimenti

- Young Researcher Award 2023, CNR Pisa
- Ph.D. Grant, CNR Pisa (scholarship and research costs)
- Best PhD Paper award, PerCom 2022
- HEC Pakistan Scholarship for MSc at Politecnico di Torino

Ulteriori informazioni

Curriculum redatto ai fini della pubblicazione per l'amministrazione trasparente ai sensi del D.Lgs. 33/2013.

Autorizzo la pubblicazione sul sito dell'Università.

Dichiaro di:

- essere consapevole delle conseguenze derivanti da dichiarazioni mendaci, previste dal D.P.R. 28/12/2000 n. 445 e s.m.i., e che le informazioni riportate nel presente curriculum corrispondono a verità;
- essere informato/a, ai sensi e per gli effetti di cui al Regolamento UE 2016/679, che i dati personali contenuti nel presente curriculum saranno trattati dall'Università degli Studi di Foggia per adempiere agli obblighi di pubblicazione ai fini di trasparenza previsti dalla normativa vigente.

Luogo e data

16/04/2025

Melbourne, Australia

Nome e Cognome

Saira Bano

Autograph signature replaced by
printing pursuant to art. 3, paragraph 2,
of Legislative Decree 39/1993.