Syed Muhammad Atif

ASSISTANT PROFESSOR · COMPUTER SCIENCE & SOFTWARE ENGINEERING

Flat No: A-102, Shumail Garden, Gulistan e Johar Block 19, Karachi, Pakistan

☐ (+92) 0335-2146-167 | ✉ syed.muhammad.atif@gmail.com | ⌂ www.posquit0.com | ▣ 5y3datif | 🎓 Syed Muhammad Atif

"Research is to see what everybody else has seen, and to think what nobody else has thought."
Albert Szent-Gyorgyi

Summary

With a background in computer science and software engineering, I am currently an Assistant Professor at the Ziauddin University in Karachi, Pakistan. Prior to joining Ziauddin University, I held the position of Senior AI Developer at HetroCloud, a research project funded by the National Center of Big Data and Cloud Computing (NCBC) that was executed at the Karachi Institute of Economics and Technology (KIET). My expertise in machine learning and computer vision spans over five years, and I have contributed to several peer-reviewed articles published in renowned conferences and journals such as Elsevier Pattern Recognition Letters, Elsevier Computer Networks, Springer Neural Processing Letters, IEEE Access, KSII Transactions on Internet and Information Systems, and IEEE TENCON. In 2017, I received the HEC Indigenous Ph.D. Fellowship in recognition of my academic achievements to pursue doctoral studies. My research interests lie in Matrix Factorization, Network Tomography, ill-posed problems, radial basis function neural networks, computer vision and deep learning. Additionally, I have served as a reviewer for the Elsevier journal Results in Control and Optimization

Work Experience

Department of Computer Science & Software Engineering, Ziauddin University
Karachi, Pakistan

ASSISTANT PROFESSOR
Jan. 2023 - to date

- Conducting assigned courses of undergraduate programs of Software Engineering and Computer Science.
- Supervising Final Year Projects of Software Engineering Program.
- Participating in research funded projects.
- Conducting academic researches maturing into impact factor publications.
- Other administrative duties.

NCBC, HEC, Pakistan under funded project "Hetro Cloud" in KIET.
Karachi, Pakistan

AI DEVELOPER
Jan. 2021 - Dec. 2022.

- Develop a scalable face recognition software that deployed on Cloud.

Steps Ahead Pvt. Ltd.
Karachi, Pakistan

WEB DEVELOPER
May. 2019 - Oct. 2020

- Implemented an asset census system which is web based real time highly dynamic multi-purpose system integrated with an Android application that performs asset census. A web based reporting tool is also integrated with this web application to analysis census results from different business angles
- Implement a damage control and management web based system. It is web based application integrated with an Android application for business damage, monitoring and control.

Department of Electrical Engineering, PAF Karachi Institute of Economics & Technology.
Karachi, Pakistan

RESEARCH/TEACHING ASSISTANT
Aug. 2018 - Apr. 2019

- Assist Head of Department of Electrical Engineering as teaching assistant.
- Check assignment and Quizzes.
- Appear as Guest speaker in MS/PhD class.
- Conduct research under "Network Tomography Lab" headed by Dr. Sameer Qazi (HOD Elec. Engg.). During the tenure, I was able to publish a IEEE conference and ISI impact factor research publications.

Department of Computing and Technology, Indus University.
Karachi, Pakistan

LECTURER
Feb. 2016 - Feb. 2018

- Conduct lectures, check assignment and mid-term/final papers.
- Supervise Final Year Projects.
- Supervise ICT FYP funded final year project "Raspberry Pi3 based Wifi Router".

Honors & Awards

2016   **Secure**, Scholarship of HEC under Indigenous PhD. Fellowship Program   *Islamabad, Pakistan*

2016   **First Place**, Clear Entry Test for PAF-KIET PhD student with 89%   *PAF-KIET, Karachi, PAkistan*

2011   **Second Place (Silver medalist)**, MS Program, UIT   *Karachi, Pakistan*

Education

PAF-KIET (Karachi Institute of Economics & Technology)   *Karachi, Pakistan*

PH.D. IN COMPUTER SCIENCE   *CGPA 3.92*

- Under HEC Indigenous PhD Fellowship program.

UIT (Usman Institute of Technology/Hamdard University)   *Karachi, Pakistan*

M.S. IN COMPUTER NETWORKS & COMMUNICATION   *CGPA 3.89*

- Silver medalist in his batch.

SSUET (Sir Syed University of Engineering and Technology)   *Karachi, Pakistan*

B.S. IN COMPUTER ENGINEERING   *CGPA 2.99*

Publications

PEER REVIEWED JOURNAL PAPERS

[1] **Atif, Syed Muhammad,** Sameer Qazi, and Nicolas Gillis. "Improved SVD-based initialization for nonnegative matrix factorization using low-rank correction." Pattern Recognition Letters 122 (2019): 53-59. [online]

[2] Qazi, Sameer, Farah Sabir, Bilal A. Khawaja, **Atif, Syed Muhammad,** and Muhammad Mustaqim. "Why is internet of autonomous vehicles not as plug and play as we think? Lessons to be learnt from present internet and future directions." IEEE Access 8 (2020): 133015-133033. [online]

[3] **Atif, Syed Muhammad,** Shujaat Khan, Imran Naseem, Roberto Togneri, and Mohammed Bennamoun. "Multi-kernel fusion for RBF neural networks." Neural Processing Letters (2022): 1-25 [online]

[4] Naveed, Muhammad, Sameer Qazi, **Atif, Syed Muhammad,** Bilal A. Khawaja, and Muhammad Mustaqim. "SCRAS server-based crosslayer rate-adaptive video streaming over 4G-LTE for UAV-based surveillance applications." Electronics 8, no. 8 (2019): 910. [online]

[5] Qazi, Sameer, **Atif, Syed Muhammad,** and Muhammad Bilal Kadri. "A novel compressed sensing technique for traffic matrix estimation of software defined cloud networks." KSII Transactions on Internet and Information Systems, vol. 12, no. 10, pp. 4678-4702, 2018. DOI: 10.3837/tiis.2018.10.004. [online]

[6] **Atif, Syed Muhammad,** Nicolas Gillis, Sameer Qazi, and Imran Naseem. "Structured nonnegative matrix factorization for traffic flow estimation of large cloud networks." Computer Networks 201 (2021): 108564. [online]

[7] **Atif, Syed Muhammad.** "DRSTP: A simple technique for preventing count-to-infinity in RSTP controlled switched ethernet networks." International Journal of Computer Networks 2, no. 6 (2011): 278-296. [online]

[8] **Atif, Syed Muhammad.** "RRSTP: A spanning tree protocol for obviating count-to-infinity from switched ethernet networks." International Journal of Computer Networks (IJCN) 3, no. 1 (2011). [online]

[9] **Atif, Syed Muhammad.** " A Critical Note On Ring Flushing." International Journal of Computer Networks (IJCN) 3, no. 2 (2011). [online]

[10] **Atif, Syed Muhammad,** Ahmed, Anees, and Qazi, Sameer. "Tri-Compress: A Cascaded Data Compression Framework For Smart Electricity Distribution Systems." Technology Forces Journal of Engineering and Sciences 1, no. 1 (2018). [online]

CONFERENCE PROCEEDINGS

[1] Memon, Rashida A., **Atif, Syed Muhammad,** and Sameer Qazi. "First Elephants then Mice: A Two-stage Robust Estimation Technique for Traffic Matrix in Large Cloud Networks in Presence of Over Dispersion." In TENCON 2018-2018 IEEE Region 10 Conference, pp. 1301-1306. IEEE, 2018. [online]

[2] **Atif, Syed Muhammad,** and Sameer Qazi. "Singular valued differential link count linear estimator for traffic matrix of large cloud computing networks." In 2017 First International Conference on Latest trends in Electrical Engineering and Computing Technologies (INTELLECT), pp. 1-6. IEEE, 2017. [online]