

● WORK EXPERIENCE

08/07/2015 – CURRENT

SOFTWARE DESIGN ENGINEER – NATIONAL DATABASE & REGISTRATION AUTHORITY

- Gather requirements and domain knowledge from National and International organizations to digitize them.
- Plan, Manage and Coordinate project objectives.
- Develop secure and intelligent enterprise applications and dashboards using (Java, Hibernate, Oracle, JSF, Struts 2, JAX-RS) while keeping check on translation of domain knowledge.
- Ensure unconstrained data transfer and real time data connectivity between private and public organizations.
- Data Analysis to study trends to aid in public policy in projects such as National Health Insurance, Tax Profiling and Ehsaas Welfare Program (Python and Dashboards).
- Interdepartmental and Interorganizational communication regarding operations of projects such as Verisys (Citizen Data Verification), Online Identity (PAK-ID), Online Visa, Online Passport and Online Voting.

Islamabad, Pakistan

11/06/2014 – 26/06/2015

SOFTWARE ENGINEER – SYSTEMS LTD

- Develop software solutions by conferring with clients while studying information needs & system flows.
- Contribute in documentation of the system.
- Hands-on development using Java, .NET and PL-SQL.
- Maintenance of existing projects

Karachi, Pakistan

11/12/2013 – 11/04/2014

INTERN – SYSTEMS LTD

- Design and develop user interfaces.
- Ensure compliance of specifications.
- Hands-on Java development.

Karachi, Pakistan

● EDUCATION AND TRAINING

09/2016 – 06/2019 – Islamabad, Pakistan

MASTER OF SCIENCE IN COMPUTER SCIENCE – National University of Sciences and Technology

- Thesis: Estimating Water Quality Using Internet Of Things and Machine Learning:
- We proposed an inexpensive water quality detection system and implemented several supervised learning algorithms to predict water quality using minimal number of parameters i.e. 4 whose IoT sensors were comparatively economical.
- Supervisor: Rafia Mumtaz

08/2010 – 06/2014 – Karachi, Pakistan

BACHELOR OF SCIENCE IN COMPUTER SCIENCE – National University of Computer & Emerging Sciences

- Thesis: Moving Object Detection, Classification and Tracking:
- We reviewed several methodologies for moving object detection, classification and tracking.
- Supervisor: Syed Tahir Qasim

● PUBLICATIONS

Publications

- **Ahmed, U.**, Mumtaz, R., Anwar, H., Mumtaz, S., & Qamar, A. M. (2020). Water quality monitoring: from conventional to emerging technologies. *Water Supply*, 20(1), 28-45.
- **Ahmed, U.**, Mumtaz, R., Anwar, H., Shah, A. A., Irfan, R., & García-Nieto, J. (2019). Efficient Water Quality Prediction Using Supervised Machine Learning. *Water*, 11(11), 2210.

● RECOMMENDATIONS

1. Name: Rafia Mumtaz

Position: Head of IT (Research Advisor)

Organisation: National University of Sciences & Technology

Email: rafia.mumtaz@seecs.edu.pk

2. Name: Syed Hassan Raza Naqvi

Position: Head of Development

Organisation: National Database & Registration Authority

Email: hassan.raza@nadra.gov.pk

● COURSES

Courses

- Introduction to Public Speaking:
 - MOOC from the University of Washington and offered through Coursera
- A Hands-on Workshop on Data Science in Practice:
 - A 5-day hands-on workshop on applied data science using Python and Scikit-learn conducted by Predictive Analytics Lab
- Technical Training on "Introduction to Java Framework":
 - Employee training conducted by Systems Ltd focused on Java and Hibernate