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Objective

To obtain a challenging position in a high quality technical environment where my resourceful experience, acquired skills and innovative ideas will add value to organizational operations.

Experience

Openware Business Pvt. Ltd.

RPA Team lead -- March 2018 to Present

Robotic Process Automation (RPA) for Routers

Key Tasks:

- Preparation of scripts for collecting Router Logs
- Configure and create virtual machines and storage devices and mounting them along with exchange of ssh keys and other details for seamless movement across the machines
- Setting up ELK (elasticsearch, logstash, kibana) stack for log analysis and visualization
- Automating the Router Web Interface for human-less web interaction to automate GUI and to make decisions of channel selection based on the available channels.
- Setting up Kubernetes engine and juju charms for micro services.
- Successfully completed the Proof of Concept for Robotic Process Automation for Nayatel's 10 ONT devices.

Tools & Languages Covered:

- Python toolboxes including lftp, pywinauto, pexpect, pandas, matplotlib, selenium, subprocess, etc.
- Linux (Ubuntu).
- ELK Stack
- Juju charms, Kubernetes.

Other Activities:

- Co-advising Final Year Students from CASE for their Final Year Project on Automating a Software Defined Network's implementation issue resolution.

Training at Dice Analytics

Data Science using Python Course -- December 2017 to February 2018

- a. *Basic Data Analysis and visualization of data using Numpy, Pandas, Scipy and matplotlib packages in Python.*
 - i. Visualizing data and different trends

- ii. Finding and replacing missing values in data
 - iii. Finding basic correlations between the data
 - iv. Gathering basic information from data for suitable machine learning model
- b. *Statistical inference and hypothesis testing using python*
- i. T-test, f-test etc.
- c. *Machine Learning techniques and analysis*
- a. Supervised Learning:
 - i. Linear Regression
 - ii. Logistic Regression
 - iii. Kn-Neighbor method
 - b. Unsupervised Learning
 - i. Kmeans method
 - ii. Trees method
 - c. Knime basics
 - d. Association Rules
 - i. Apriori Algorithm
 - e. Network Theory
 - i. Use of tools like Gephi etc.

Tools & Languages Covered:

Jupyter Notebook, SQL, Python, R, Knime and Gaphi (Basic)

Online Courses taken (datacamp)

- a. Intro to Python for Data Science
- b. Statistical Thinking in Data Science (Part 1 and 2)
- c. Intro to SQL for Data Science
- d. Data Visualization using Python
- e. Supervised Learning using Scikit Learn Package in python

LCC Pakistan Limited c/o Huawei Technologies Pvt. Ltd.

3G RF Optimization Engineer (Huawei-Jazz Project) -- August 2016 to January 2018

Projects

Warid, Mobilink Core Merger (MOCN)

- i. **2G MOCN Preparations**
 - a. Benchmarking KPIs and Parametric audits for 2G MOCN on Cell, BSC and IU level
 - b. Planning and moderating FPLMN Flushing Activities for nationwide 2G MOCN including creation of dummy cells, flushing MNCs to remove EPLMN from forbidden list etc. prior to merger.
 - c. Planning LAC change activities to facilitate 2G MOCN Activation

d. Planning flushing activities for the MORAN sites and clusters

ii. **3G MOCN Activation**

- a. KPI Benchmark, neighbor auditing of 3G MOCN on RNC, Cell, IU and CNOperator level
- b. Neighbor auditing and LAC verifications for EPLMN definitions

iii. **IP Modernization and Swap Project**

- a. Monitor IP modernized sites, provide KPI benchmarks for the activity and troubleshoot any major degradations
- b. Monitor Zero calls, KPIs for 3G Swap. Perform initial configuration tests and troubleshoot any degradations or issues.
- c. U900 Monitoring and benchmarking performance. Features used: IRC, NBIS.
- d. New 3G Rollout sites monitoring and troubleshooting

iv. **DSEURR DNI Project**

- a. Monitoring and troubleshooting 3G KPIs for Peshawar, Islamabad and Rawalpindi Cities after merger, swap and unlocking of new rollout sites.
- b. Analysis for U900 for worst RTWP cases and resolution techniques.
- c. Worst cells analysis for swap and multiple core network KPIs and meeting KPIs as per agreed values

Mobilink Super 3G Project

- KPI Benchmark and analysis for the new rollout second carrier on 3G Cells
- Daily RNC Monitoring for Rawalpindi City
- Parametric, Neighbor auditing, Feature Trials including MOCN, CPC, ACP, SRB over HSUPA/HSDPA, and Immediate Assignment on TCH.
- Script preparation for miscellaneous trials and features.

Tools used: PRS, U2000/M2000, Nastar, CME, OmStar, MS Excel VBA

Ericsson Pakistan:

Radio Network Design and Optimization Engineer 2G/3G -- September 2013 to June 2016

Achievements:

Ericsson Performance and Achievement award on successfully delivering the RF design and locking it with Mobilink.

Projects:

Warid 2G/LTE Optimization Project (May 2016 - June 2016)

- Preparing Acceptance reports for the new rollout sites.
- Monitoring NCS and FAS results to perform neighbor and frequency optimization.
- Monitoring Stats and preparing KPI reports and on-site rectification requests.

Mobilink 3G Project (January 2015 - May 2016):

Parametric tuning and Optimization of new rollout and existing sites:

- Performed License calculations, analysis and Channel element, user expansions calculations.
- Analyzed and Improved KPIs including parametric tuning and neighbor optimization. Carried out rollout of new sites and optimizing them to meet Network level KPIs.

Multicarrier sites Project:

- Added additional 5MHz to the existing 3G Network
- Implementing, troubleshooting and initial tuning of the newly on-aided second carrier site licenses and Hardware expansions
- Optimizing the KPIs for Multicarrier Sites and implementing different multicarrier strategies to overcome congestion, blocking and other issues.

Implemented features:

- **Multicarrier Feature (Carrier binding):** to utilize the complete 10MHz band to get 42Mbps throughput.
- **Load Based Handover:** Performed on different sites where Load based IRAT handover was needed.
- **CS Restriction on 2nd Carrier:** CS was restricted on 2nd carrier to avoid blocking and reduce call drops.

Mobilink 2G Swap and Expansion Project (September 2013 - December 2014):

- Designing network's low level design for swap of GSM network. Design implementation on - ground and troubleshooting.
- Hardware and cell design documents preparation to configure cell on network etc.
- Planning TRX Expansions to overcome the traffic congestion and improve KPIs. This included Hardware/Power license and hardware calculations.
- Extracting and analyzing statistics for basic troubleshooting of cells and initial tuning of new rollout sites.
- Planning and executing Radio Network Design work orders for features and special case sites. Initial tuning of WCDMA new rollout sites, parameter tuning, feature testing and implementation. Reconciliation, Mbps calculations and Hardware/License Auditing

Trainings

- Ericsson WCDMA W13 Functionality, Design, Initial Tuning, and Performance
- Ericsson LTE W14 Functionality
- Huawei EHS (Environment Health and Safety) training
- CISCO CCNA R&S (currently in process)

Software/Tools

Mentum Cell Planner, WinFiol, MapInfo (Piano and Sitesee tools), Citrix (CNA, BSM), ENIQ Web Intelligence, Citrix Clients for Network Monitoring (NCS, MRR, FAS, Traffic reports, TRX reports), Moshell, SecureCRT, F-Secure, Packet Tracer, ELK stack.

Education

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Swabi

Bachelors of Science in Electronic Engineering (2009-2013)

Islamabad Model College for Boys, F-8/4, Islamabad

Intermediate Exam (2006-2008)

Volunteer Positions Held

- IEEE MadC 2017 Ambassadors Coordinator (Jan 2017 - Current)
- Industry Relations Coordinator, IEEE Islamabad Section (2017 - Current)
- IEEE Day 2018 Contest Platform Consultant (Jan 2017 - Current)

University Projects Done

Final Year Project: Computer Generated Holography

Worked on 3D Microscopes using Holography, that should be able to measure flow rates, map a micro particle in 3 dimensions etc and digitizing the holography process. This project included rigorous programming on MATLAB along with a Graphical User Interface.

Technical Skills

- Microsoft Office: Word, Excel, Powerpoint and Access (basic)
- Programming in Excel VBA, C, Assembly Language, Ladder Logic, MATLAB, python, C# (basic), Modelsim (Verilog HDL), Linux (basic), Web Development Including (HTML/CSS/Javascript/PHP/jQuery/Bootstrap), UNIX (basic file handling).
- CISCO Packet Tracer, GNS3.
- Electronic Simulation Software like Proteus, PSpice, Multisim, Mentum Cell Planner, TEMS Discovery, Mapinfo etc.
- Project management software: MS Project

Conference Publications

Farooqui, M.A. , Khan, M. S. , Salman, A., ' *Producing Products, The Green Way : Road to Pakistan*' in International Conference on Business Management (ICoBM) 2013, February 20 - 21, 2013, University of Management and Technology, Lahore.

Professional Memberships

- IEEE (Institute of Electrical and Electronic Engineers)
 - Computer Society
 - Communications Society
- OSFP (OpenSource Foundation Pakistan)
- ISOC (The Internet Society)

Activities and Interests

- Participated in 1st Hajj Hackathon (August 1-3, 2018 in Jeddah) and developed a project named "Hajj API".
- Leading the IEEE Islamabad's Data Science working group (2018 - onwards)
- Lead the Industry Relations and Membership development activities for IEEE in Pakistan (2018 - onwards)
- Lead the team to organize first Pakistan Student Computer Society Congress and IEEE Pakistan Student/Young Professionals/WIE congress (2015)
- 3rd Prize at Civic Hackathon Competition held at Islamabad for developing an app mockup within 24 hours (2016).
- Represented Pakistan at Dhaka, Bangkok, Hyderabad (India), Colombo and Dubai in various IEEE meetings and events (2013-2016).
- Volunteered at The Citizens Foundation's One Day Career Workshop in Nowshera.
- Was presented certificate of recognition by Mr. Ahsan Iqbal (Minister Planning) on leading a team to Sri Lanka that won 8 out of 12 awards (2015).
- Was part of organizing team of Conference: "Pakistan Energy Options" organized by SOPREST, and GIK Institute in Islamabad (2012)
- Organized IEEE Pakistan Student Congress 2012 for the first time at GIK Institute as the coordinator of Congress.
- Led a team to National Engineering Robotics Competition (NERC), 2011 held at NUST.
- Led a team to Future Flight Design, 2011 (FFD) held at Istanbul, Turkey.
- Delivered Several Workshops on basic circuitry of Line following robots and motor control circuits under flag of IEEE GIKI.