SYED SHABBIR

Industry:	Data Scientist, Software Engineering, Telecommunications
Years of Experience:	15+
Status:	**US Citizen.**
Location:	Houston, TX USA.
Education:	B.E. (Electrical Engineering), M.S.(Data Science) – Currently Enrolled
Contact Number:	**425-652-0204**
Email:	shabbirshahidds@gmail.com

Career Objective

Seeking a career-oriented **Data Scientist position** with a reputed organization providing an ambience to nurture professional, personal growth and enable to enhance skills utilizing abilities to the maximum, committed to professionalism; highly organized, work under strict deadline schedules with attention to detail and have excellent analytical, technical and managerial skills.

Summary

- Proficient in Python programming, Tableau and custom Dashboards.
- Data Science projects using Jupyter Notebook and Spyder.
- Machine Learning, Linear and Logistic Regression analysis, ANN, CNN.
- Proficient in Python web framework called Django.
- Python libraries Pandas, Numpy, Matplotlib, Seaborn, Scikit Learn, keras, tensorflow, pytorch etc.
- Automation – Writing scripts using VBA, PHP, HTML, CSS and JAVASCRIPT.
- Good understanding of writing codes.
- Radio Frequency Engineering, specialized in RF Design/Planning, Performance & Optimization for LTE, 3G, WiFi and Mobile WiMAX.

Skills

Python, Data Analysis, Data Mining, Data Reporting, Data Management, Numpy, Pandas, Scikit Learn, Tensorflow, Deep Learning, Machine Learning, Artificial Intelligence, Telecommunication, Wireless, SQL, HTML, Javascript, CSS, Jupyter, Notebook, Django, Tableau, Automation, Linux, ANN, RNN, CNN, Excel, Web Scraping, AWS, Cloud, Google Colabs.

Professional Work Experience

August 2015 to Present

VERIZON, Houston, USA.

Distinguished Data Scientist

Leading Engineering efforts for Verizon in-house System Performance Softwares like RTT, xLPT, Zite, Workorder Tool.

- Experience in project management on a data science project
- Experience using data mining process models using CRISP methodology to design and execute data science project.
- Experience preparing and analyzing structured and unstructured datasets to explorations and evaluating data science centric models.
- Experience working with multiple data types and formats as a part of a data science project.
- Experience applying a range of analytic approaches, including (but not limited to) machine learning, deep learning neural networks that are part of the exploration.
- Experience coding in various programming languages (Python, SQL) to conduct various phases of data science projects.
- Experience creating and querying different datastores and architectures (such as Oracle, and open-source databases) to work with various types of data as part of the data science project.
- Experience using tools for data visualization (graphs, tables, charts, etc.,) and end-user business intelligence.
- Leading may Data Analytics activities related to Network performance.
- Accomplished many System Performance based Data Science projects using Python on Jupyter Notebook. For example parameter optimization.

- Using Advanced Machine Learning techniques like Linear and Logic regression.
- Proficient in Python web framework called Django.
- Provide Software Engineering support from Verizon Headquarter for 4G and 5G networks performance data.
- Helping Agile Teams as an SME for software.
- Proficient in working on Linux based servers.
- Proficient in managing, creating and automating automation tasks. Proficient in writing **shell scripts, cronjobs** and managing **MySQL databases.**
- Proficient in writing scripts, codes on **Python, PHP, HTML, CSS, JS.**
- Designed and developed real time recommendation engine to rank Cell Site performance in network.
- Used Python and Pandas to scrape, clean, and analyze large datasets
- Developed detection method for missing ROP Files for Ericsson PM counter data.
- Coordinated with Security team to ensure data masking efforts adhere to corporate policies.
- Developed eFemto/S-Femto Tableau Dashboard for Houston Gulf Coast Region.
- Developed Nokia vMME workorder creation tool.

September 2014 to July 2015 (40 Hours Per Week)

LCC International, Overland Park, Kansas, USA.

Sr. RF Engineer

Responsible for RF strategic planning activities on Sprint network for major markets in USA.

- Expert in using Mentum Planet as an RF Planning tool.
- Proficient in Altryx, Capesso, ACP, Mapinfo, Google Earth etc.
- Propagation Model analysis based on Group selection, Band and Environment types
- Execute Prediction studies for RSRP, RSRQ, SINR, throughputs, Coverage by Transmitters
- Grid Query analysis and combining to obtain Data statistics for different Layers
- Coverage and Tonage calculations of different markets for timelines like Q12014, Q22014, Q32014, Q42014, MID2015, EOY2015.
- Pulling network and layer statistics for different markets and downtown AOI's to show throughput and RSRP ranges with traffic maps.
- Analyzing average throughput, RSRP and CINR, best server layers to meet the target of 2.5Mbps in downtown and 1Mbp in non AOI areas for In building analysis
- Troubleshot RF coverage and capacity issues in major US markets. Added sites strategically to meet specific market targets related to Capacity/Coverage.
- Running Network Analysis with different cell loading like 25%, 50% and 75% and produce Average throughput, RSRP and CINR plots.
- Engaged in all RF team meetings, weekly calls. Guided new Engineers with the process and RF tools.

May 2014 to September 2014 (40 Hours Per Week)

AT&T Mobility, Houston, USA

Sr. Specialist RAN Engineer+ (RF Performance)

Responsible for AT&T Houston N/W RF performance issues related to Macro, iDAS, oDAS and Small cell. Closely working with optimization and national team in order to resolve issues. Responsible for external interference issues reporting high RSSI's in UMTS and LTE sites.

- Familiar with AT&T internal tools like Quantum, RMap, MBBT tools.
- Strictly followed all internal policies and rules.
- Responsible for Houston Market and its suburbs for Small cells, DAS and Macro RF performance.
- Trainings related to LTE/UMTS air interface and architecture.
- Worked closely with other teams including optimization and design.
- Expert in using R&S PR100 RF Receiver and DDF007 for external interference hunting.
- RAN parameters modification (cell selection-reselection, neighbor relationships, Intra-frequency, inter-frequency and IRAT handover control, power control, admission control, packet scheduling etc.
- UMTS/HSPA performance indicators analysis (CS and PS call setup success rate – RRC and RAB, intra-frequency, inter-frequency and IRAT HO success rate, SHO factor, CS and PS dropped call rate, cell congestion, throughput – R99 and HSDPA, Ec/Io, MOS).
- BCCH planning issues. Monitoring performance statistics in terms of access failure rate, drop call rate, traffic load per sector/carrier, soft handoff percentage and deliver recommendations for cells with degraded performance.

- Hands-on experience on Ericsson OSS & parameters, BO, MapInfo, Arieso, Asset3g, Atoll, TEMS and Actix.

Trained on:

- LTE Air Interface, Protocols and Procedures
- LTE/SAE System Overview
- Asset 3G
- WCDMA Performance Management Workshop
- Presentation Skills
- Negotiation and Conflict Management Skills.

1st May 2013 to April 2014 (40 Hours Per Week)

TIME WARNER CABLE, VIRGINIA, USA.

RF Design Engineer

Responsible for **Timewarnercable WiFi** n/w RF planning/design and testing for Outdoor and indoor RF network,

- Designing sites for New York and Charlotte, NC Markets using Forsk Atoll 3.2 Planning Tool and ACP tools.
- APs mapping to Ruckus Zone Directors / Cisco controllers in different markets using Mapinfo 11.5 tool.
- Monitor, Analyze, trouble shoot, and optimize RF network performance.
- Data capacity tuning and optimization.
- Calculating RF link budget for UL and DL including: Antenna gain, Transmit power, Diversity gain, Noise Figure, Receiver Sensitivity, EIRP, Lognormal Fading, Fast Fading, Interference margin, Number of resource elements, Power per resource element, Building loss, Vehicle loss, Body loss and Target SNR.
- Troubleshooting / Investigating RF related issues in outdoor and venues deployment.
- Daily Activities include Reviewing and approval of RF designs.
- Meetings on daily/weekly basis to interact with vendors and core team for smooth roll out.

29th August 2012 to 30th April 2013 (40 Hours Per Week)

LCC International, Inc., VIRGINIA USA.

RF Design Engineer
TIMEWARNERCABLE HERNDON, VIRGINIA

Responsible for **Timewarnercable** n/w RF planning, design testing for Outdoor and indoor Wi-Fi,

- Provide RF design and Quality Control (QC) verification support for New York, KS City, Charlotte NC markets deployment of TWC network.
- Link Budget Calculations for different antenna selection, interference analysis using RF planning tools like Atoll/Airmagnet Planner for sites planned as per the RF design.
- Field testing of newly on-air APs using AirMagnet Tools which includes passive survey and active iperf surveys.
- Support the nominal planning, candidate selection and site surveys up to site acceptance.
- Evaluate (walk) test data to identify performance areas.
- RF Model tuning of model Cost-Hata for different clutter classes.
- QC of newly on-air APs by doing point testing using Samsung Tablet which includes Analyzer, speedtest utilities.
- Recommend RF solutions and recommend changes to improve network performance.
- Good technical understanding of Access Points provided by different vendors.
- Coordinates with vendors like Ruckus, Cisco, BelAir, TWS, Arris, AT4 Wireless on daily/weekly basis to ensure the work flow and continue growth of TWC Network.

1st December 2011 to 22nd August 2012 (40 Hours Per Week)

Mobile Integration Workgroup (MIW), Washington USA.

LTE Engineer
AT&T LABS REDMOND, WASHINGTON USA.

- Validation of LTE new nodes like ENodeB, MME, HSS, PGW/PCEF, SGW, S4SGSN, PCRF, 3GPP AAA Proxy, IMS etc.
- Good knowledge and understanding of 3GPP standards for RAN and EPC core.
- Handling Test Lab Plan of TOL and generating summary and progress based graphs on Quality Center HP.
- Knowledge of LTE Call flows like Attach, Detach, TAU etc and testing of different tests like Circuit Switch Fall Back, IRAT, Session Management, Fault Management, MME Resiliency, MME hardware, Cause Code Forwarding, Intervendor Mobility, Access Restriction, Interface Resiliency & Verification, Alarms, Features, IMS etc.
- Good understanding of different interfaces like LTE-Uu, S1MME, S1-U, S11, S3, S5/S8, S4, S9, S10, SGi, S6a, S6d, Gn, SGs, Sv, Sbc, Slg, Sls, etc.
- Using different UEs like Sierra Wireless, Samsung, HTC, LG phones (LLDM Interface) for call testing.
- Connecting and building up the Lab includes IP connectivity, hardware connectivity, RF connectivity through RF attenuators, RF distributors etc through different EnodeBs.
- Validate RF sanity checks of eNBs and NodeBs if all the RF plumbed correctly with accurate radio parameters in Test Areas.
- Analyzing traces through JDSU client by logging into the server for LTE call flows on MME.
- Good Understanding and knowledge of CCNA and CCNP.
- Coordination with vendor like ALU, CISCO, HP, JDSU related to multiple issues in call flows and leading the team of vendor engineers.
- Good understanding of ALU MME 9471 hardware i.e. OAM, Hub, MIF, MAF Cards. And Software version: ALU LM5.0.1 (RR26.49.09) and ALU eNB software version LA4.0.3.
- Working on ALU latest software release i.e. LM5.0 supporting default and dedicated bearers.
- Good understanding of different protocols like NAS, S1AP, X2AP, MAP, SGsAP, RANAP, DNS, GTPv2, DIAMETER, SCTP, UDP.
- Validate the connectivity of MME with eNBs through SIAD and MSNs.
- Good Understanding of IP based networks, end to end connectivity with different nodes like Switches, Routers etc.
- Hands-on experience using Alcatel-Lucent 5620 Service Aware Manager (SAM) version 10R1 and MI-GUI to maintain eNBs and MMEs.
- Coordination with different AT&T internal departments like Labops, RT services, Lab support ticketing system to handle the work flow in timely manner.
- Good troubleshooting skills in LTE E2E network.
- Maintaining several spreadsheets like LAB devices tracker, MME pending test cases, Lab Ticket Progress.
- LTE RAN Radio Principles, Parameters, Algorithms and QoS monitoring description.
- eUTRAN Parameter Description, Radio Resources Management, Session Management, Mobility Management.
- Experience in using RF planning and optimization tools including tools specifically including NPO and SAM.

March 2010 to 30th October 2011 (40 Hours Per Week)

UCE International BANGLADESH.

Sr. RF Engineer (Wimax)
Huawei Technologies Bangladesh

Working in Huawei Technologies Co. Ltd. as RF expert.

- Radio Network Planning of Dhaka city and Chittagong city using ATOLL 2.8.1.
- In ATOLL 2.8.1, calculation of cell radius and site area as per customer requirements for required coverage and capacity.
- Running Simulations in ATOLL 2.8.1 with Cost123-Hata model for Wimax 802.16e by using Huawei clutter class losses formulae.
- Importing of all the required data in ATOLL 2.8.1 includes Digital Maps, Engineering Parameters, Link Budget values, RF parameters, Antenna File, Clutter losses etc.
- Importing of cluster boundaries, KPI boundaries from MapInfo or Google Earth to ATOLL 2.8.1.
- Run Predictions on ATOLL 2.8.1 and export it to Google Earth to compare it with drive test results.
- Managing SSV-DT, TSSR and RF reports of Dhaka and Chittagong sites.
- Managing and Post-processing of drive test results using XCAP-X Version 4.104.14 and GENEX Assistant.
- Working on Huawei BTS DBS3900 with version of DBS3900WiMAXV300R002C02SPC220.
- Finalizing KPI polygons, cluster boundaries, drive test routes with customer.

- Recommendations on technical RF issues and Concerned Areas with bad radio conditions.
- Improve the KPI's defined of 130 on-air sites within the 8 different clusters in Dhaka city on the basis of CINR, RSSI in air interface.
- Monitoring DL and UL throughput in all Modulation and coding schemes like 64QAM, 16QAM and QPSK working fine within the cell.
- Currently working on the launch of FFR implementation in Chittagong city.
- Comparing the optimized PUSC with optimized FFR in Chittagong.
- Maintaining CINR plots pattern with in FFR zones to avoid fluctuations.
- Analyzing the handover success rate, handover failures, handover between PUSC and 1/3 FFR zones, ping-pong handovers etc.
- Monitoring handover drop counts, network entry failure counts, FTP throughput failure by using XCAP-X and M2000.
- Optimization of concerned areas raised by customer to meet their required KPIs.
- Managing local teams to complete the Cluster's Drive Test within time frame by using XCAL-X and GENEX Probe and assign daily activities to them.
- Analyzing DT results in Google-Map on the basis of obstacles creating vertical blockings and causing bad RSSI.
- Providing RF Training Sessions and Proper Guidelines to the local RF resources on 4G/Wimax RF Architecture, Frame Structure, RF Parameters, Technical Tools etc.
- LTE solutions workshop in Huawei.

14th January 2009 to 14th February 2010 (40 Hours Per Week)

TEKSIGNALS ABU DHABI UNITED ARAB EMIRATES.

RF Application Engineer.

- Formation of Quotations & deliver technical support.
- Launching new products as per customer's requirements.
- Developing new business opportunities on technical basis..
- Meetings in Customer's Premises.
- Demo/Presentations of new 4G RF products to our customers and to the technical department.
- Helping customers with technical information and tools handling.

May 2006 to May 2008 (40 Hours Per Week)

ALCATEL-LUCENT PAKISTAN LTD

RF ENGINEER / RF Team Lead

- Radio Network Planning using A9155 & Frequency planning of Wimax Network using Re-use 4, 5 in Karachi & Faisalabad.
- Optimizing different KPIs such as: Active/sleep CIDs, RF Ai Channel Utilization, MCS Utilization, Network entry and ranging success rate by changing setting parameters and physical configrations.
- Firmware up gradation of PCMCIA and Indoor CPE.
- Benchmarking/Comparison between Alcatel-Lucent and Motorola netwok performance.
- VOIP Testing using Hammer call analyzer (Tool to calculate VOIP quality with MOS factor).
- Monitoring daily KPI's, Congestion cells, investigate the interference cell and making a Report.
- Parameters Audit.
- Identifying Cross Sectors.
- Troubleshooting of sites for good radio conditions.
- Wimax Sites survey with complete panoramic views & avoid horizontal & vertical blocking.
- Calculation of Knife-edge diffraction losses.
- Drive Test with locked & unlocked neighbouring cells.
- Post processing of drive test results.
- Preparation Of Site Health Reports (SHR).
- Wimax Featured W2_W2MR_W2.1_W2.1_MRproject_V6.2.
- Wimax Network Design Process.
- Adaptive Modulation and Coding (AMC) Principles.
- NPO Network Optimizer.
- Optimization for the new on-air sites via interference study or changing parameters in OMCR.

Field Tests Experience

1. DL Throughput Test.
2. UL Throughput Test.
3. Network Entry Test.
4. Coverage Test.
5. Capacity Test.
6. Sensitivity Test.
7. DL Vs UL simultaneously Test.
8. Ping Test.
9. Speed Test.

Hands-on experience on Technical Tools
1. X-Cal versions 1.41 and 3.1.3.82 2. X-Cap. 3. X-Lite. 4. MapInfo. 5. ZyXel Utility tool. 6. Spectrum Analyzer with VSA (Vector Signal Analyzer) software (Agilent E4445A). 7. CPEs (ZyXel, Motorola, C Dot) 8. A9155 Tool.

ON JOB TRAININGS in WiMAX:

- WiMAX Architecture and Dimensioning
- WiMAX network elements like AAA, BS, CN, DHCP, HA, OMC-R, RAN, WAC & WAN.
- WIMAX Air Interface.
- WiMAX Radio Network Planning
- Planning & Optimization Process
    1. Propagation Models in 2.5 GHz & 3.5 GHz
    2. WiMAX Traffic Issues
    3. WiMAX Interference Issues
    4. Link Budget & Parameters
    5. WiMAX Planning Methodologies
    6. Site Considerations
        - WiMAX Roadmap
        - WiMAX Propagation Model Calibration
        - Adaptive Antenna Systems
- The Benefits of Adaptive Antenna Technologies
    - Overview, IEEE/WiMAX Forum
    - MIMO: basics, performances and deployments
    - Beam forming: basics, performances and deployments
- WiMAX Capacity Calculations.
- WiMAX End to End Architecture.
- WiMAX Radio Algorithm (Parameters)
    - Network Entry Procedures
    - Network Re-Entry Procedures
    - Handovers (Intra WAC & Inter WAC)
    - Alarms
    - Counters & Indicators

ON LINE TRAININGS in WiMAX:

- Measurement methods with Dynamic Beam Forming for W3MR1ed2B [France]
- WIMAX Quality of Service, Overview [France]
- WIMAX W3 New Features, Overview [Romania]
- VoIP Architecture Overview.
- Counters/Indicators status, NPO Status, View/Reports for QoS follow up [France]
    - QoS mechanism in the RAN.
    - QoS Algorithms.
    - QoS main parameters that affect the optimization of SF.
    - Management.

June 2004 to July 2004 (40 Hours Per Week)

MOBILINK PAKISTAN LTD
Telecom Internee

Worked as an internee in Pakistan's Largest operator Mobilink orascom in RF department.

Educational Qualifications

B.E (Electrical / Telecom) Engineer 1st Division 2005
NED University of Engineering & Technology, Karachi, Pakistan.

Stanford Advanced Project Management Certification

M.S. (Data Science) (Currently Enrolled)
Bellevue University, Bellevue, NE

Professional Skills

- Possess strong communication, interpersonal and technical skills.
- Conversant with MS-Office 2007 and 2010, MS Projects applications.
- Can fluently speak, read and write English.
- Result oriented and challenge seeker person with a positive mindset & creativity.