

**Sardar Muhammad Usman Khan**

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**Home:** 33720 Tampere, Finland

# ABOUT ME

Highly motivated and experienced Wireless radio access network engineer skilled in integrating, commissioning and deploying GSM, UMTS, LTE, and5G-NR cellular technologies. Hands-on experience in designing, testing and modifying network parameters. Proven ability to troubleshoot and resolve issues, with commitment to efficient project management and documentation. Eager to leverage expertise and academic pursuits to contribute meaningfully to a dynamic and innovative wireless environment.

# WORK EXPERIENCE

## Wireless RAN Engineer

***Huawei Technologies*** [ 19/07/2019 – 30/04/2022 ]

**Country:** Pakistan

* Worked on the Radio layer, Transport layer and Physical layer.
* Performed scripting, integration, configuration, deployment and commissioning of 2G, 3G, LTE, 5G NR.
* Implemented 5G NSA FDD & TDD radio solutions for band N1 and N78.
* Designed and implemented In-Building Solutions (IBS) to enhance indoor coverage.
* Deployed Massive MIMO & beamforming configurations (32T32R and 64T64R).
* Co-MPT SRAN conversion and carrier expansion. (2G,3G, LTE,5G NR).
* Implemented L700 NBIOT, IPsec, and Fiber node.
* Expansion and ESN modiﬁcation for LTE & 5G NR License.
* Upgraded hardware, software, and patches for all RAT.
* Implemented GPS, GNSS, and IP clock for network synchronisation.
* Conﬁgured RF hardware, and external alarms and conducted swap activities.
* Performed IP migration and bandwidth expansion activities at the wireless end.
* Conducted testing and scanning techniques to identify and mitigate interference in RF wireless systems.
* Compliance with Cybersecurity and Network safety standards.
* Monitored and troubleshooted alarms and services on the live network.
* Prepared detailed Low-Level Designs (LLD) and defined Method of Procedure (MOP) for projects.
* Managed integration projects, trained team members, and ensured smooth department collaboration.
* Investigated and prepared root-cause analysis (RCA) reports in case of network incidents.
* Proactively addressed and resolved customer issues, ensuring high customer satisfaction.
* Performed post-project technical audits for quality assurance and provided high-level technical support to field teams.
* Maintained daily activity reports, escalated issues, and followed up with concerned teams.
* Developed and maintained technical documentation for various RAN equipment and integration procedures.

## Wireless Operations Intern

***PTCL*** [ 01/01/2019 – 01/02/2019 ]

**Country:** Pakistan

* BSS operation and maintenance.
* Ticket handling and low-level troubleshooting
* Monitoring of alarms/outages.
* LTE Sites health check.

# EDUCATION AND TRAINING

## Master's Degree in Electrical Engineering Specializing in Wireless Communications and RF Systems

***Tampere University*** [ 28/08/2023 – Current ]

**Country:** Finland

* RF Electronics.
* Introduction to Satellite Positioning.
* Basic and Advance Wireless Communication
* Radio Wave Propagation in Wireless Networks
* Basic and Advance Digital Signal Processing
* Communication Theory

**Bachelors in Telecommunication Engineering**

***University of Engineering & Technology*** [ 22/10/2014 – 27/07/2018 ]

**Country:** Pakistan

* Next Generation Networks.
* RF & MW Communications.
* Antenna and Wave Propagation
* Digital Logic Design
* Final year project ( Comparison of Digital Modulation Techniques in LTE & LTE-Advance ).

# SKILLS

HuaweiU2000 / MAEU2020 / Wireless Deployment Tool / CME / SolarWind / Microsoft Office / NMS / Cisco packet Tracer / MATLAB / NI-MultiSim / Python Basics / Git Basics

# STRENGTHS

Problem-Solving / Detail Oriented / Adaptability / Analytical Thinking / Team Player / Communication & Coordination

# PROJECTS

## Job-Related

* Saudi STC Aspire ( LTE FDD/TDD Merge, L700 NBIOT Expansion, Massive MIMO 32T32R)
* Bahrain STC Mega ( New 5G NR rollout with TDD 3.5 on Whole Network )
* Iraq Fastlink MIMO ( LTE TDD 64T64R Massive MIMO, Split Sector Expansion)
* Kuwait STC Bundle ( 3G U900 Expansion, IBS Modernization, GL1800 SDR, AIR Activation)
* Kuwait STC Dismantling ( UMTS U2100 shutdown from the whole network)
* Kuwait STC SUB3G and C-Band ( NSA 5G with L2100 layer, New 5G NR-N78 Band Implementation)
* Kuwait STC Reconstruction ( SRAN Co-MPT conversion in GU, GUL, GULN 2G,3G, LTE,5G )
* Kuwait STC Frontline ( New Rollout of Macro, IBS, COW sites 2G,3G, LTE, 5G)

# CERTIFICATIONS

## Professional

* Huawei Certiﬁed ICT Professional (LTE)

## Courses

* Python Essentials
* Mobile/Cellular Networks Basics
* 5G Fundamentals Training
* Cisco Certiﬁed Networking Associate (Routing & Switching)
* Open RAN and 4G/5G Private Networks Building
* Introduction to IoT and Digital Transformation
* Orthogonal Frequency Division Multiplexing (OFDM)
* Wireless Security
* Cloud Essentials\_AWS

# HONOURS AND AWARDS

## Achievements

* Awarded with Tampere University Scholarship for Master's studies.
* Commended by the Director of Wireless Huawei for exemplary contributions to Projects.
* Won intra-university badminton tournament, demonstrating exceptional skill and sportsmanship.
* Recognized as Best Sports Event Organizer, ensuring seamless execution.

# LANGUAGE SKILLS

* English (Proficient)
* Finnish (Beginner).