**RAJANBABU RAJARAMAN**

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**RF / RAN Engineering / DATA Analytics / Data Visualization**

* NW Architecture • Antenna design • Operational Analysis • 5G • LTE • VoLTE • UMTS • CDMA

(• Nokia / Alcatel • Samsung • Ericsson • Motorola)

• **Data Analytics Boot camp program** 2021 from DU

**SUMMARY OF QUALIFICATION**

* Over 18 years of extensive experience working in wireless communication and Vendor management.
* Expertise in Planning, Design, Implementation, Optimization, and Performance validation - **(LTE/5G), 5G NSA/SA, and CORE systems**.
* 15+ years of experience working as RF Engineering support with creations, approvals upgrades, performance improvement analysis, coordinated with projects, Status summary updates, regional projects - scorecard validation, cost-effective capacity, and budget plan
* Expert with **C-RAN**, **CBRS,** **Massive MIMO, NFV, SDN, IoT, API, Cloud Computing, Big Data,**

**Machine-Learning** and **Tableau / Power BI tools**

* 4+ years Responsibility for Design, Development & Testing of VHF & UHF Antennas
* 15+ years of experience with RF designing, Coordinated design projects, design modifications for extension approval for **MI Verizon and AT&T** market sites.
* 2+ years of developing competitive insights based on field testing of emerging technologies and feature deployments by Tier 1 Operators and Radio Access technology
* Worked with network cross-functional teams during development activities
* Expertise in **5G**, **LTE, VoLTE CDMA, EVDO**, **and UMTS Network Architecture and 3GPP aspects**
* Leadership certification and Agile Program – Project management certifications
* 5+ years of experience utilizing **Technology Tools, Data Visualization, Analytic and SW Tools**.
* Monitor and Discover deterioration in critical KPIs and follow up with a cross-functional team

**SPECIALIZED ANALYTIC TOOLS**

* Data Visualization and Technology Analysis:
* **Tableau, Alteryx, Power BI Dashboard, R-Map, MapInfo,** **ATOLL, PLANET EV, dB Planner**, Tornado (Siemens), **ACTIX**, TEMS, **NetAct (Nokia), Arieso (ER)**

**EXPERIENCE UTILIZING SOFTWARE TOOLS**

* Proficient in **Microsoft Office** tools like Outlook, Word, Excel.
* **Languages:** **Python**, JavaScript ES6+, CSS3, HTML5, **SQL**
* **Applications:** **GitHub**, MongoDB, MySQL, PostgreSQL, **GIT,** AWS, Flask, **Tableau**

**EDUCATION**

* Master of Business Administration in Operations Management, IGNOU, India - 2011
* Bachelor of Engineering in Electronics, Anna University, MIT, India - 1990
* **Data Analytics Boot camp from DU 2021**

**PROFESSIONAL EXPERIENCE**

***IHS’ MARKIT, Bellevue WA 2020***

***SR Engineer (Research &Solutions)***

* Research & Solutions Team, and Radio Access technology - an independent and consumer-focused benchmarking division of IHS Markit
* Develop competitive insights for significant carriers **(Verizon,** British Telecom**,** T-Mobile & AT&T**) based** on field testing of emerging technologies and feature deployments by Tier 1 Operators such as **5G NR (FDD, TDD Sub6, mm Wave), NB-IoT, LTE-Advanced, Massive MIMO**
* Support Pre & Post-Sales customer relationships and assist in Product innovation and roadmap
* Performance validation and RF Data analytics – Tableau, LMA Wireless metrics analysis used

***AT&T, Redmond WA 2010 - 2018***

***Professional RAN Engineer***

* **RF design responsibility for ND and MN markets and played a crucial role in support of Zodiac project (UMTS overlay into 137 CDMA / 65 GSM sites)**
* UL noise mitigation project (West region) - Met or exceeded the regional uplink monthly completion goal.
* **Vendor management** is inclusive of Regional External interference, PIM, and **post-Performance validation**.
* **Managed Regional training program** inclusive of courses allocation, Budget plan, Coordination with the Regional and National leadership team.

**KPI Acute analysis**, Zero RRC traffic validation, and DCR Degradation for the PNW market.

* Preliminary triage analysis, Tracking projects with our internal partners
* Infill site Design for MNP market (LTE /UMTS), Design modifications for Extension approval for MI market sites.
* Performed Traffic simulation, Neighbor list generation, scrambling code, and **PCI planning (LTE)** **using Atoll**
* Capacity trigger and coverage enhancement sites for three-year forecast plan
* RF safety coordination and FCC license validation

***Alltel / Western Wireless, Bellevue WA 2004 - 2010***

***SR RF Engineer***

* Responsible for handling RF Design and Optimization for North Dakota Market and MN market sites. (136 CDMA upgraded with EVDO Rev A, 66 GSM Sites).
* Cost-effective **Capacity and Budget plan** for CDMA/GSM NW for the World Hockey Tournament in the ND area
* Candidates Evaluation inclusive of Search rings (SARF)release
* Improved the statistics through timely deployment of performance and capacity enhancements
* Responsible for current spectrum utilization and preservation of PCS license.
* **GSM hopping features** enabled for 65 GSM ND eastern area sites
* CGSA Unserved Territory analysis. Extension Agreements and Frequency Coordination
* Performed antenna mod design to improve the Performance for identified QOS areas for ND sites.

***Wireless Facilities Inc. San Diego, CA***

***2000 - 2004***

***RF Design Engineer***

**Clients:** Western Wireless Corp./ Verizon Wireless, Nebraska / Leap Wireless/Cricket communications, SD / Siemens Mobile communication LTD, Sao Paulo, Brazil

* **Model tuning**, Frequency Planning for augmenting the WWC Site capacity.
* Site Survey, Calibration, and E911 Accuracy Test inclusive of Functionality Test (Verizon sites).
* Nominal cell design GSM network with search area analysis - using Siemens RF tool.

***Motorola India /HELIOS Antennas 1990 - 2000***

***System Engineer/CFE***

**Clients:** Spice Telecom in INDIA / OPT (Posts & Telegraphs) AFRICA / Telsim GSM – Turkey

* **Responsibility for Design, Development & Testing of VHF & UHF Antennas**
* Responsible for implementation of Nokia GSM Network and Project Coordination
* **RF Propagation tests** and site selection activities for SPICE Telecom**.**
* **Implementation** of BSS expansion (TCH carrier Addition), Turkey **Network integration** for sites at Gabon, Africa

**ATTAINMENTS & TRAINING COMPLETED**

* Awards Solution Training Certified in
* **Leadership Transformation Program; Agile PG/PM: Agile Bronze**
* 5G NR / Evolution-Massive MIMO; Advanced LPWA for IoT / M2M; RAN capacity and Dimensioning
* **SQL Boot camp, Data Analytics Boot camp 2021 DU**
* **AT&T Silver Certified Professional in LTE, Volte & UMTS**