Mohini Anne Dsouza, MS Wireless Engineering

mdsouza@umd.edu • LinkedIn.com/in/mohini-anne-d-souza/ *646-575-8302 • Falls Church, VA 22043*

Recently graduated results-driven wireless engineer with varied international experience contributing to key development projects. Able to work well on a cross-functional team to **improve optimization and design practices in wireless technologies**. Eager to contribute telecom engineering skills to an organization for continued growth and professional development.

Areas of Expertise include:

- Cellular Technologies
- Signal Processing
- RF Design
- Automation
- Scripting
- Data Analysis
- Software Programming
- Software Development Lifecycle

Programming Languages: Java, Python 3.6, Bash Shell Scripting, Batch Shell scripting
Wireless Technologies and Protocols: GSM/ GPRS, CDMA2000, UMTS, WCDMA, LTE: PDCP, RLC, MAC, RRC, IP, NAS
RF Design and Optimization Tools: HFSS, MapInfo, TV Study, Mentum Planet, iBwave – L1 Certified, Alteryx
Software Development Tools: Atlassian JIRA, GitLab – CI/CD, Git SVN, Jenkins, Docker, Visual Studio Code, Sprint Tool Suite
Operating Systems: Windows, Linux, CentOS

Education

Master of Science, Telecommunications Engineering, University of Maryland, College Park, MD (2018 • 3.8 GPA)

Coursework: Wireless Protocol Stack, LTE-Advanced and 5G evolution, RF Indoor Design-DAS and Small Cells, Distributed Systems in Virtual Environment

Projects:

- Designed MIMO-based distributed antenna DAS system to support multiple carriers for in-building coverage using iBwave Design. Deployed low-cost uniform RF coverage of RSRP -80 dBm for all floors with bidirectional antennas (11-12/2017)
- Deployed LTE network with 3 E-NodeBs to provide -85 dBm max coverage to DC metropolitan area using Mentum Planet Radio Design; designed an improved link budget design to optimize mobility, integrity and availability KPI; improved RSRP to -70 dBm with 4X4 MIMO (10-12/2017)
- Developed an application program to measure service retainability as key performance indicator (KPI) of a CDMA network; reduced dropped calls to 12% in CDMA system; optimized system using admission control to reduce the number of rejected calls to 4% using Python (3-5/2017)
- Data extraction system - constructed a Java application using UDP socket programming to transmit data between server and client (11-12/2016)

Bachelor of Engineering, Electronics & Telecommunications Engineering, University of Mumbai, India (2015)
Coursework: Computer Programming, Microwave Engineering, Computer Networks and Protocols, Signal Processing

Professional Experience

T-MOBILE US INC. • Washington, D.C. • 6/2017 – 12/2017

RADIO SPECTRUM INTERN, ENGINEERING

Gained valuable experience developing scripts and processes to improve wireless services in key markets.

Key Accomplishments:

- Interference Analysis of ISIX Case 3 Using MapInfo and TV Study: Developed and analyzed cell site simulations to reduce RF interference and accelerate cell site deployment in LTE; monitored various KPI parameters of soft-launched Chicago and New York sites.
- Optimized various radio parameters and channel related parameters for 600 MHz spectrum re-farming and repacking process in key US markets and created data automation processes using Alteryx for site analysis.

- Spectrum Monitoring System Using Life Bandscan: created a Bash script to run Perl program to collect signal parameters of TV channels in 600MHz; handled system failure and other errors to ensure continuous transmission of information to central database.
- Determined which cell sites could be deployed immediately around existing incumbent TV towers without causing interference to their transmission; Created Tableau visualizations to highlight the cell sites that caused the most impact.

FEDERATED WIRELESS INC. • Arlington, VA • 2/2018 – 11/2018

CONTRACT WIRELESS SOFTWARE ENGINEER, DEVELOPMENT AND OPERATIONS 2/2018 – 11/2018

On contract with a small team of 3-4 employees; responsible for developing and testing TA2 Spectrum Collaboration Challenge – a commercial Spectrum Access System - in Linux-based secure test environment; authoring and packaging several Java applications to build toolchain framework using Apache Maven automation tool; Creating Python scripts for testing and deploying various LTE based RF and traffic scenarios in secure test environment; Modifying existing Java applications and Python scripts to resolve debugging issues; Creating and updating issues on JIRA's Agile Board for bug tracking and project management; Using CI/CD build tools on Gitlab to implement scenario designs; Performing source code management using version control on Gitlab.

Key Accomplishments:

- Resolved a problem with project build breaking when run against new input files by creating and adding Java applications to existing package to handle the new design requirements.
- Streamlined verification process by developing and releasing an automated deployment test verification tool into production environment using Bash shell script.
- Made the build process faster and neater by creating the build process in a virtualized container like Docker.
- Created and added Python scripts to existing package of Python scripts in verification stage to display design throughput information in HTML report documents: These throughput values are displayed against corresponding output throughput and values that fell below design value or exceeded more than 10% of design were highlighted; Created a script that displayed the traffic throughput average of 50-node data point.

HONG KONG SHANGHAI BANKING CORPORATION LTD. (HSBC) • Pune, India • 8/2015 – 7/2016

SOFTWARE ENGINEER, GLOBAL COMMERCIAL BANKING

Developed data warehouse applications in COBOL to migrate data from older programs. Created a DB2 database to log error information in client programs for Master Data Module. Designed front-end CICS screen for credit card approval processing system.

Key Accomplishments:

- Increased CPU processing efficiency to 70% by optimizing data warehouse applications in COBOL based programming.
- Designed the user interface for a Credit Card Approval Processing System; implementing improvements to make it easier for the user to switch between pages and options.