Sai Durga Rohit Gagan Gullipalli

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EDUCATION	George Mason University, Fairfax, VA	May 2019
	Master of Science in Electrical Engineering	GPA 3.47
	Jawaharlal Nehru Technological University, Kakinada, A.P, India	May 2017
	Baba Institute of Technology and Sciences, Vizag	GPA 3.5
	Bachelor of Technology in Electronics and Communication	

TECHNICAL SKILLS

Programming: C, MATLAB, Python(Basic), Pspice, Xilinx ISE
Applications: Microsoft Office, VMWare Workstation, GNU Radio
Miscellaneous: OFDM, LTE, MIMO, GSM, CDMA, GPRS, EDGE, UMTS, Link Budgets, OFDMA, SC-FDMA.

EXPERIENCE

Modem System/Field Test Engineer   July 2019 - Present
Qualcomm

- Supporting field certification, performance, functional test and lab activities for US carriers (AT&T, Verizon, Sprint, T-Mobile)
- Planning and executing innovative test scenarios to uncover critical modem issues in different RF conditions using Test rail, QXDM respectively
- Overseeing field test execution, analyze failure logs especially LTE, 5G NR NSA & SA logs using APEX to debug and track issues until they are resolved
- Identifying KPIs to improve modem performance
- Audio Quality and M2E delay measurement using NOMAD
- Device bring up and calibration

PROJECTS/ INTERNSHIPS

Noise Cancellation using LMS Adaptive Algorithms   Feb 2019 – May 2019
ECE 635 Course Project

- Analyzing the performance of different versions of LMS Algorithm – NLMS, Sign, Sign-Sign in noise cancellation of an audio signal.
- Added system generated AWGN noise to the audio signal and filtering it using LMS algorithms in MATLAB.
- Performance analysis through convergence speeds, learning curves.

LDPC Codes Performance Analysis   Aug 2018 – Dec 2018
ECE 732 Research Project

- Reviewed IEEE publications and past research on LPDC codes and their performance.
- Analyzed the performance of LDPC codes in AWGN, Rayleigh, Rician Channels
- Comparative analysis of BERs of LDPC, Turbo, Polar, and Convolutional Codes at different block lengths and code rates.

Reed-Solomon Encoding and Decoding   Aug 2018 – Dec 2018
ECE 633 Course Project

- Wrote code in MATLAB for generation of Galois Field operators, XOR and AND operations, generator polynomial, error locator polynomial, and error evaluator polynomial
- Encoded the message using bit by bit XOR and AND operations

- Decoded the encoded message bits using GF operators MULT, DIV, error locator and evaluator polynomials

Ground to Ground communication links   Sept 2017 – Dec 2017
Case Study Project
- Extend the viable range of the communication link beyond the relatively small propagation range of a point to point communication link using aerial drones carrying repeaters for an ad-hoc network system.
- Used Radio Wave Propagation Simulator to determine the optimum locations of the drones to achieve desired coverage at George Mason University.
- Analyzed the Business case for this technology.

LTE Radio Network Planning using Atoll   Dec 2016 – Apr 2017
Team Lead
- Led a team of 5 members in planning a LTE network using Radio Network Planning Tool Atoll
- Planned Capacity, Coverage, Frequency and other Network Parameters for Network efficiency
- Calculated Uplink and Downlink link budgets
- Predicted Coverage by Transmitters, Effective signal analysis, Overlapping Zones, Service area analysis using Atoll
- Simulation using Monte Carlo algorithm to evaluate Network Throughput

BSNL-RTTC, Hyderabad, A.P, India   Jun 2016 – Jul 2016
Internship
- Worked on the projects Interference Measurement in GSM Radio Network, Security Management in UMTS Networks, and Implementation of VoIP using Wi-Fi Backbone
- Collected Key Performance Indicators data using JDSU Drive test tool and calculated the Call Setup Success Rate and Drop Call Rate through long call and short call during the Drive test
- Identified the areas with very low C/I value and high drop call rate and analyzed the reasons for Interference and proposed necessary changes to be done
- Worked on Mobile Equipment – 2G GSM, CDMA, 3G Mobile, Optical Fiber Cables - Jointing & Fault tracing, Optical Fiber Systems – SDH, DWDM, Telecom Switch – CDOT, Broadband, Networking Equipment

BSNL-RTTC, Hyderabad, A.P, India   Dec 2015
In-plant Trainee
- Overview of Telecommunication networks, Digital Switching Principles – PCM Principles, Signaling, Latest switches in Telecom industry
- Mobile Communication Principles - Cellular Principles, Principles of GSM, Network Architecture, Call Processing, Handovers, GPRS, EDGE, CDMA Principles, Power Control, EVDO, 3G Technologies and Overview of Mobile Services
- Intelligent Network – Network Architecture and IN Services, Next Generation Network – Overview and Architecture, Fundamentals of RF Planning and Optimization

Automatic Room Light Controller using Arduino   Aug 2016
DIY Project
- Wrote a program for Arduino UNO to detect the person's entry or exit from room using proximity sensors
- Made circuit connections on breadboard to switch on/off the light bulb based on the inputs from Arduino.

RELEVENT COURSEWORK	ECE 521 Modern Systems Theory ECE 527 Learning from Data ECE 528 Random Processes in Electrical and Computer Engineering ECE 531 Introduction to Wireless Communications and Networks ECE 542 Computer Network Architectures and Protocols ECE 630 Statistical Communication Theory ECE 633 Coding Theory ECE 635 Adaptive Signal Processing ECE 699 Software-Defined Radio ECE 732 Mobile Communication Systems

CERTIFICATIONS

Principles of Modern CDMA/MIMO/OFDM Wireless Communications   Jul 2016 – Sep 2016
NPTEL MOOCs Certification

Bayesian/MMSE Estimation for Wireless Communications- MIMO/OFDM Jul 2016 – Sep 2016
NPTEL MOOCs Certification

Virtualization and Cloud Computing   May 2015 – Jun 2015
Technophilia Systems

MOOCS

Principles of Communication Systems Part 1 & 2
Estimation for Wireless Communications –MIMO/ OFDM Cellular and Sensor Networks
Advanced 3G & 4G Wireless Mobile Communications
Wireless Communication
A System View of Communications: From Signals to Packets (Part 1,2,3)

ADDITIONAL EXPERIENCE

Graduate Teaching Assistant, George Mason University   Jan 2018 – May 2018
ECE Department Grader

Indaroma Mason Inc, George Mason University   Aug 2017 – Jan 2018
Cashier

Mason Dining – Ikes   Nov 2017 – May 2019
Cashier/Food Service Worker

Baba Institute of Technology and Sciences, Vizag, A.P, India   Jul 2015 – Apr 2017
Department of Electronics and Communication Engineering
Student Committee Member

KSHITIJ Techno-Management Fest, IIT KGP, India   Oct 2014- Jan 2015
Campus Representative