SHARAN ERUKULLA

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EDUCATION

University of Maryland, College Park _(Expected) May 2019_
M.S., Telecommunications GPA: 4.0/4.0
National Institute of Technology, Warangal _May 2015_
B.Tech., Electronics and Communication Engineering GPA: 8.64/10.00

TECHNICAL SKILLS

Computer Languages	C, C++, Python, Shell Scripting, Java
Wireless Technologies	OFDM, LTE, LTE-A, IEEE 802.11 b/g/n/ac
Operating Systems	Linux, Windows, MacOS
RF Equipments	Remote Radio Head, Duplexer, Diplexer, Tower Mounted Amplifier, Bias Tee, RxAIT, LLC
Tools	Vector Network Analyzer, Spectrum Analyzer, Anritsu Line Sweep Tools
Softwares	Matlab, Mentum Planet, Xilinx Vivado, Eclipse, IntelliJ IDEA, LaTeX, Agile Methodologies

RELEVANT COURSES

Modern Wireless Technologies	Wireless OFDM Systems	Design of Cellular Infrastructure
Networks & Protocols	Digital Communications	AWS / PCS System Implementation

WORK EXPERIENCE

Skylark Wireless LLC _June 2018 - Present_
Engineering Intern _Houston, TX_

· 5G Massive MIMO channel trace measurements and analysis.
· Antenna S-Parameters, radiation pattern and performance measurements.
· Monitoring service for a Software Defined Radio system to control fans, LEDs, humidity and temperature.

Hewlett Packard Enterprise _August 2015 - July 2017_
Senior R&D Engineer, Operations Bridge Reporter (OBR) _Bangalore, India_

· Developed Collection module using Java for collecting data from other monitoring solutions from Hewlett Packard Enterprise.
· Designed and developed Internal Alerting module using Perl's Simple Event Correlator (SEC) Framework to configure alerts.
· Integrated Hubot and Jenkins with OBR to monitor and update the administrative and build jobs of the product.
· Delivered training's related to the product to new team members, customers, support team and other stakeholders.

PROJECTS

Simulation of OFDM Transceiver with synchronization and tap-delay line channel _April - May 2018_

· OFDM Receiver was time and frequency synchronized to the transmitter with the use of preambles.
· Channel's random phase delay was estimated with a precision of 0.1% with the use of pilots.
· SNR vs BER analysis was performed and observed that BER decreases as SNR increases.

Protocol Stack Development _December 2017 - March 2018_

· Modified, optimized and implemented an open source LTE Rel-8 Stack on USRP B210 hardware.
· Established a communication link (call) between an eNodeB and an UE (both running on different USRP B210 hardware) and transmitted a real-time video in the ISM frequency band.
· Configured USRP B210 as transmitter and receiver with different modulation schemes like FM, AM, QAM, BPSK, QPSK, etc. using GNU radio companion.

Deployment and analysis of GSM and LTE Base Stations _September - November 2017_

· Planning and deployment of GSM and LTE sites to provide maximum coverage in Washington D.C., College Park, MD and the surrounding areas using the Mentum Planet tool.
· Modified base-station parameters like transmitter power, antenna height, orientation and mechanical tilts to improve the efficiency and coverage of the deployment by 10%.
· Performed Interference analysis for the deployed sites using the Poseidon AWS Interference Calculator and confirmed that the deployment doesn't interfere with the microwave links.

Measurement of Data Transfer Characteristics of a reliable data transfer protocol _November 2017_

· A distributed data networking application in Java (using the UDP Sockets), consisting of transmitter and receiver which can send and receive data packets

· Measures average, maximum and minimum round trip times (RTT) statistics of data packets and overall data rate during the data transmission phase.

Frequency Tracker *October 2017*

· Matlab Application to track the frequency of the signal (in the presence of Additive White Gaussian Noise) at a given point of time with an accuracy of 99%.

LEADERSHIP EXPERIENCE

President, Telecommunications Students and Alumni Network (TSAN) *May 2018 - Present*
University of Maryland, College Park

· Building relationships with the Telecommunications industry and maintain alumni network.
· Work with fellow TSAN Board members and organize events for the students community.

Project Lead, 5G Protocol Stack Development *May 2018 - Present*
University of Maryland, College Park

· Leading a team of graduate students currently working on protocol stack development and implementation
· Delivered training sessions on many topics including USRP hardware, Bash scripting, GNU Radio Companion.

Program Representative, Graduate Student Government (GSG) *May 2018 - Present*
University of Maryland, College Park

· Serving as a liaison between the ENTS Graduate Students and the GSG for any concerns they have.
· Active member of Academic Affairs committee, review University and Graduate School policies and develop GSG proposals on issues pertaining to the academic and professional development of graduate students.

Chairperson, IEEE Student Branch *January - December 2014*
National Institute of Technology, Warangal

· Promoted research in the university.
· Student branch won the bronze medal for the Darrel Chong Student Activity Award in Region 10 for the year 2014-15.
· Represented the student branch at the IEEE Hyderabad Section Congress.

ACADEMIC ACHIEVEMENTS

Institute Merit Scholarship *2012, 2014, 2015*
National Institute of Technology, Warangal

· Granted for securing a position among the top 5% students of the institute.

All India Engineering Entrance Examination (AIEEE) Merit Scholarship *2011-2015*
Central Counseling Board, All India Engineering Entrance Examination

· Received for being one among the top 0.002% of 1.1 Million students who appeared for the AIEEE - 2011.

Winner (2nd Rank), Signals and Communication Quiz Competition *August 2013*
IEEE Communication and Society and Signal Processing Joint Chapter, Region 10

· All the IEEE members of the Region 10 participated in this competition.

TRAININGS

BSNL, Regional Telecom Training Center *November - December 2012*

· Acquired knowledge on the following Advanced Telecommunication topics as an Inplant Trainee:

Overview of Telecommunication Networks	Mobile Communication Principles
Digital Switching Principles	Next Generation networks
Fiber Optic Communication Principles	Intelligent Networks
Broadband, DSL Technologies	

Novacomm Digitronics *May - July 2014*

· Diagnosed issues arising from Cable TV Setup Boxes and made suitable design improvements.
· Responsibilities included working with Ball Grid Array Equipment, Testing and Servicing of Setup Boxes and Soldering on PCBs.