Kanishka Macherla

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Education

Master of Science in Telecommunications Engineering — Expected May 2018
University of Maryland, College Park

Bachelor of Technology in Electronics & Communications Engineering — May 2016
National Institute of Technology(NIT) Surat, India

Field of interest

• Computer Networks • Software Engineering • Wireless Communications • Satellite Communication

Technical Skills

Programming Languages: C, C++, Java, Python, HTML
Networking Protocols: TCP/IP, IPv4, IPv6, UDP, HTTP, RIP, ARP, OSPF, BGP, IGRP, EIGRP, DNS, LAN, VPN.
Engineering Tools: MATLAB, Cisco Packet Tracer
Platforms: Windows, Linux
Wireless Technologies: LTE, GSM, CDMA, WCDMA, HSPA, OFDM, WIMAX.

Relevant Experience

Industrial Trainee — **Summer** 2014

Bharat Sanchar Nigam Limited(BSNL), Hyderabad, India

• Learnt about mobile communication services at BSNL with emphasis on practical aspects of GSM (BSC, BTS), UMTS and CDMA technology and also got aware of the old and new telecommunication devices and methods used.
• Learned about the working of VSAT technology used in BSNL

Technical Projects

Design and Implementation of JAVA based distributed networking application for reliable data transfer functionality over unreliable UDP transmission model. — **Fall** 2016

University of Maryland, College Park

• The client sends a request message with a measurement ID in XML format to the server and the server looks up value from the data file and responds with appropriate response.
• The program implemented the techniques of integrity check, time-out and retransmission to ensure reliable data transfer without errors.

Python application to simulate the effects of admission control on a single cell in a mobile cellular network — **Spring** 2017

University of Maryland, College Park

• Created modules for estimating the channel behaviour by calculating shadowing effect, fading effect, pathloss, signal to interference noise ratio (SINR).
• Maintained a track of the number of dropped calls, blocked calls, successfully completed calls and failed calls at each second of the simulation that ran for 2 hours.
• The efficiency of the basestation was improved by implementing admission control (changing the power radiated by the basestation in accordance with the channel demand) to reduce number of blocked calls.

Implementation of Frequency Tracker using MATLAB — **Fall** 2016

University of Maryland, College Park

• Designed a frequency tracker that detects any change in the frequency of the given signal.
• The frequency tracker accurately detected the exact time where the frequency of the signal changed and also the new value of the frequency. This change was then represented in a frequency versus time plot.

Channel estimation in OFDM(Orthogonal Frequency Division Multiplexing) system — **Spring** 2016

NIT Surat, India-Undergraduate project

• Worked on OFDM by performing simulations in MATLAB to measure the performance of OFDM system under different channel conditions, and to allow for different OFDM channels to be tested.
• Evaluated performance of Block and Comb type Channel estimation for OFDM System under various modulation techniques.

Leadership Skills

• **Student Welfare Secretary** NIT Surat — **July** 2014 - **May** 2015
• **Network Secretary** NIT Surat — **July** 2013 - **May** 2014