



## CHAITANYA AMBALLA

B.Tech, Electrical Engineering

Roll Number: EE15B001

Indian Institute of Technology Tirupati

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## OBJECTIVE

- To succeed in an organization that contributes to the ever-changing world and which gives me a scope to utilize my skills and enhance my knowledge for a better growth of myself and the organization

## EDUCATION

Program	Institution	%/CGPA	Year of Completion
B.Tech, Electrical Engineering	Indian Institute of Technology Tirupati	8.60/10	2019
Senior Secondary Education	Sri Chaitanya Junior College, Visakhapatnam	97.9%	2015
Secondary Education	The Sun School, Vizianagaram	9.8/10	2013

## INTERNSHIPS

- Physical Layer Components of 5G Networks – Lekha Wireless Solutions, Bangalore, Karnataka**  
Summer Intern (May - July 2018)

My work is mostly concentrated on the synchronization part, both at the transmitter and receiver. Various modules which I had developed were taken by the FPGA team for the hardware implementation and the results were positive.

- Primary Synchronization signal (PSS) and Secondary Synchronization Signal (SSS) modules in the Physical Broadcast Channel (PBCH) block
- Layer Mapping and Antenna Port Mapping modules in the Physical Downlink Shared Channel (PDSCH)
- A receiver algorithm for the downlink synchronization based on the cyclic prefixes (CP) added to each OFDM symbol is developed in 'C'
  - Estimation and compensation of carrier frequency offset (CFO)

*Guide: Dr. Sreenath Ramanath, Director, Systems R&D, Lekha Wireless Solutions, Bangalore*

## ACHIEVEMENTS

- Sai Pratibha Puraskar by Sri Sai Foundation for class X
- Eligible for Inspire award scholarship of ₹ 80,000
- Won gold medals in classes IV and V for NSO(National Science Olympiad) and NCO(National Cyber Olympiad)
- Won Silver medal in IMMO in class X (2012-2013)
- Merit in JVV Science talent test
- Took active participation in many Science fair exhibitions and many national level Olympiads like NSO, NCO, SLTSE, NSTSE, IMMO, IMO since class IV and continued upto class XII

## PROJECTS

- Coexistence of LTE-Unlicensed and Wi-Fi using Machine Learning (B.Tech Project)**

Determining the number of optimal slots an LTE base station should transmit in a time frame, giving a fair amount of time for Wi-Fi when both LTE and Wi-Fi try to co-exist in an unlicensed spectrum. The model should be able to predict the time slots for the LTE and Wi-Fi in the upcoming frames.

Project Advisors: Dr. K P Naveen, Dr. Ramakrishna Gorthi

+Data not verified by IIT Tirupati

- **Blood Cell Classification and Disease Diagnosis (ML, IVP, DSP Lab course project) (10 months)**  
Counting number of Red Blood Cells, classification of White Blood Cells into its categories from blood smear images and detecting some diseases using Image Processing and Machine Learning (used Convolutional Neural Networks) techniques  
Course Instructors: Dr. Ramakrishna Gorthi and Dr. Subrahmanyam Gorthi  
Other Team Members: J Jeevan
- **Speech Enhancement using Deep Learning (Deep Learning course project) (3 months)**  
Removing various types of noises present in a real time speech signal and thereby enhancing the speech for better visualisations and interpretations. Trained a Convolutional Autoencoder type network by using the log power spectrum features  
Course Instructors: Dr. Ramakrishna Gorthi

## SKILLS

- **Programming Languages**
  - Traditional languages - Intermediate skill in C
  - Object Oriented languages - Intermediate skill in PYTHON
  - Other Oriented languages - Intermediate skill in HTML, CSS, P5 JavaScript
- **Software Operated**
  - Intermediate skill in MATLAB, LabVIEW, OrCAD & Pspice Simulators
  - Intermediate skill in Arduino, MS Office and basics in Auto CAD
- **Soft Skills**
  - Self-confident, active learner adapting to the changing technology, possess good technical and communication skills

## COURSE WORK

- **Key Courses taken**
    - Pattern Recognition and Machine Learning
    - Image and Video Processing
    - Analog Circuits
    - Signals and Systems
    - Digital Signal Processing
    - Design and Analysis of Algorithms\*
    - Data Structures and Algorithms in Python\*
    - Deep Learning for Computer vision\*
    - Control Engineering
    - Communication Systems
  - **Labs**
    - 'C' Programming
    - Digital Systems
    - Digital Signal Processing Lab
    - Analog Circuits
    - Electrical Machines
    - Advanced Electrical Engineering Lab\*
- \* To be completed in Nov 2018.

## POSITIONS OF RESPONSIBILITY

- House Captain, team "Sivaliks", IIT Tirupati, 2016-2017
  - Stood in the 2nd place among the four houses at IIT Tirupati
- Member of Technical committee, IIT Tirupati, 2017-2018, 2018-2019
- Department Sports Representative, Electrical Engineering, for the academic year 2017-2018
- Represented IIT Tirupati team in Inter IIT Tech Meet 2018 for "Safety Devices for Fishing Vessels" problem

## EXTRA CURRICULAR ACTIVITIES

- Event Coordinator, Golem Terminus, "Tirutsava", Techno Cultural fest of IIT Tirupati
- Hospitality Core in Anfang, the first Technical fest of IIT Tirupati
- Been an active participant in various sports activities like Table Tennis, Cricket, Volley Ball and Basketball that are organised in and around the campus and secured many prizes in which some of them include a 2nd prize in Intra IIT Table Tennis, 2nd in Cricket and 1st in Basketball
- DSLR photography

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