

Aman Singh

amansingh160899@gmail.com | +91 8959740385
linkedin.com/in/amansingh99 | theamansingh.me

EDUCATION

NIT CALICUT

B.TECH IN ELECTRICAL AND
ELECTRONICS ENGINEERING
May 2021 | Calicut, Kerala
GPA: 8.31/10

LITTLE WORLD SCHOOL HIGH SCHOOL FROM CBSE

AFFILIATED SCHOOL
May 2017 | Jabalpur, MP
Score: 85.8/100

SKILLS

PROGRAMMING

C++ • Shell • Python • Matlab •
Assembly

SIMULATION AND DESIGN

LTSpice • Eagle • Simulink • Proteus
Agilent ADS • Verilog HDL
Familiar
Cadence Allegro • MultiSim

OTHERS

After Effects • Premier Pro • Blender

COURSEWORK

MAJOR

Signals and Systems
Analog Electronics
Power Electronics
Microprocessors and Microcontrollers
Digital Signal Processing
Control Systems
Electrical Machines
Power Systems

HOBBIES

Music
Basketball
Video Games
Movies
Reading Articles

LANGUAGES KNOWN

English - Full professional proficiency
Hindi - Native or bilingual proficiency

INTERNSHIP

TEXAS INSTRUMENTS | TEST AND VALIDATION INTERN

April 2020 – June 2020 | Bangalore, KA

- Estimation of analog front end receiver non linearity in the presence of source non linearity for faster testing and validation by loop-back testing method.
- Used PE43508 DSA at the input of feedback channel and verified that the DSA is linear enough to produce acceptable results.
- Achieved error as less as -117dBFS in non linearity estimation. Significantly faster testing speed compared to conventional methods.

ACADEMIC PROJECTS

BATTERY MONITORING SYSTEM September 2020 - Present

- A data-driven approach for modelling a complex non linear system like a Lithium-ion battery.
- Prediction of state of health and state of charge of a battery with the help of machine learning algorithms.

AMBIENT NOISE REDUCTION IN HEADPHONES March 2019

- Records the unwanted noise from outside and inverts it. Then the inverted signal is phase delayed by 20 degrees.
- The delay is calculated such that it causes destructive interference of sound waves and hence causing the unwanted noise to get cancelled.

CENTRALIZED SOLAR PANEL SYSTEM October 2018

- Maximizes the solar energy utilization for a city by measuring spherical coordinates of the direction of maximum intensity
- The calculated spherical coordinates were then passed to solar panels in the city that helps them align in the maximum intensity direction.

FEEDBACK CONTROLLED BUCK CONVERTER October 2019

- Fully analog PWM controller for a buck converter for a fan load with feedback loop.
- The circuit was made fully using operational amplifiers and passive elements.

HOBBY PROJECTS

COMMUNICATION OVER POWER LINES August 2020

- Very cost effective method for home automation.
- 8-bit serial communication between transmitter and receiver.
- PIC Microcontroller decodes the logic states and toggles the appliance state accordingly.

FM TRANSMITTER February 2017

- A small range FM transmitter to broadcast music in my neighbourhood. It was made by the use of basic electronics components like transistors, capacitors etc.

WORKSHOP PROJECTS

BLUETOOTH CONTROLLED CAR October 2017

- Workshop on building Bluetooth controlled car using MSP-430 launchpad conducted by IEEE Kerala Chapter.