Jyotishmaan Tripathi

Personal Data

Place and Date of Birth:	Lucknow, India | 06 July 1997
Address:	3122 Krishna Bhawan, BITS Pilani 333031
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Education

May 2020(Exp.) Bachelors of Engineering (Honours) in Electrical and Electronics
Birla Institute of Technology and Science, Pilani **| GPA : 7.6/10**

May 2020(Exp.) Masters in Science (Honours) in Mathematics
Birla Institute of Technology and Science, Pilani **| GPA : 7.6/10**

April 2015 Intermediate Education , CBSE
Hope Hall Foundation School, New Delhi **| Percenatge : 91**

Work Experience

Jun 2018-Jul 2018 Research Intern at DRDO Solid State Physics Lab, New Delhi
Monolithic Microwave Integrated Circuits
Designed an ultra-wideband low noise amplifier using gallium-nitride (GaN) high electron mobility transistor technology. This MMIC amplifier was designed using resistive feedback topology and was comparable in performance to distributed amplifiers but with significantly reduced power consumption. Circuit was designed and simulated on AWR.

Dec 2017-Jan 2018 Software Development Intern at Techture Structures Ltd., Nagpur
UI/UX Design | Revit API
Designed and developed a web application to be used by clients for creating 2D plans which would be converted to 3D Revit models made of prefabricated components using Revit API. The application was built using Google web toolkit.

University Coursework

Mathematics
Multivariate calculus and Vector fields
Differential Equations
Optimisation
Operations Research
Discrete Mathematics
Graphs and Networks
Probability and Statistics
Topology
Discrete Mathematics
Fuzzy Logic and Applications

Electronics
Electronics Devices
Digital Design
Microprocessor and Interfacing
Signals and Systems
Control Systems
Microelectronic circuits
Analog and Digital VLSI design
Communication Systems
Operating Systems
Object Oriented Programming

Projects

Ongoing | Foreground Segmentation in HEVC encoded videos
Guide: Dr. Devesh Samaiya, Assistant Professor, BITS Pilani
An approach to utilize the existing video surveillance infrastructure to optimize electricity consumption in large indoor spaces such as library reading halls, waiting rooms etc. Only compressed domain parameters are used for separating the foreground thus, reducing complexity and providing real time performance

Ongoing | Study of fuzzy multi criteria decision making and its applications
Guide: Dr. Shivi Agarwal, Associate Professor, BITS Pilani
Fuzzy *analytic hierarchy process* [AHP] and *technique for order of preference by similarity to ideal solution* [TOPSIS] to be applied to decision making scenarios like plant location selection and their results compared.

Ongoing | Home automation system using mobile application
Circuits Laboratory
Designing a home automation system using Arduino UNO and bluetooth module (HC-05) which allows controlling home appliances using a mobile application.

Aug 2018 - Dec 2018 | Study of Markov Decision Process
Guide: Dr. Rakhee, Associate Professor, BITS Pilani
Value iteration and policy iteration methods used for solving forest resource management problem. Simulation done using Python and run time and number of iterations compared. Resulting code finds application in solving various decision making problems.

Aug 2018 - Dec 2018 | Multiplexer using transmission gate logic style
Analog and Digital VLSI design
Designed a 8-to-1 multiplexer using transmission gate logic. Implemented a 4:2 priority encoder using gate level modelling where the user could determine the input having highest priority.

Jan 2018 - May 2018 | IC Tester
Microprocessor and Interfacing
Designed a 14 pin ZIF pocket tester for verifying IC 7408, 7486 and 7432. 8086 was programmed using Assembly language and the circuit simulated on Proteus8.

Jan 2017 - May 2017 | Simulation of queueing model
Operations Research
Profitability of single and multi server queuing models compared in accordance with upkeep cost and revenue generated. Random distribution of users simulated using Java.

Skills

Basic Knowledge: Assembly, SQL, HTML, CSS, LTSpice, Verilog, Linux, Proteus, LaTeX
Intermediate Knowledge: Java, C , MATLAB, Javascript

Positions of Responsibility

Current	Sports Secretary at Krishna Bhawan, BITS Pilani Was responsible for procurement, management and maintenance of sports inventory for the hostel. Overlooked the team selection for intra BITS sports meet.
Nov 2017 - May 2018	Captain at Swimming Team, BITS Pilani Led the team to a tally of 5 medals which included a gold in the team relay event at Aavhan, IIT Bombay 2018. Was esponsible for organizing iBOSM, an intra-college swimming event and a triathlon.

Interests and Activities

- Graph algorithms, Modelling of optimization problems, HCI, and GUI design
- Teaching Volunteer for middle and high school students at People for Human Dignity
- Swimming, Running
- Technology, Programming