

Rohit Gupta

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Education

Indian Institute of Technology Kanpur

Kanpur, India

MASTER OF TECHNOLOGY, MECHANICAL ENGINEERING **CPI: 8.0/10.0**

2018 - 2019

BACHELOR OF TECHNOLOGY, MECHANICAL ENGINEERING **CPI: 7.7/10.0**

2014 - 2018

Aggarsain Public School

Kurukshetra, India

CLASS XII, CENTRAL BOARD OF SECONDARY EDUCATION **PERCENTAGE: 90.8%**

2013 - 2014

Scholastic Achievements

2014 **All India Rank 946**, Joint Entrance Exam Advanced, 150,000 candidates

India

2014 **National Top 1%**, National Standard Examination in Astronomy (NSEA)

India

Work Experience

Controls Engineer EATON INDIA INNOVATION CENTRE

Mar. 2021 - Present

- Developed and tested control software for EATON TCM for Proterra, HMC, Kensworth, FAW.
- Implemented some key features such as hill hold, Anti-Lock Braking System.
- Application softwares used: Matlab Simulink, Vector Canape, Vector Canalyzer

Structural Engineer EATON INDIA INNOVATION CENTRE

Aug. 2019 - Feb. 2021

- Supported electrical portfolio of the company as design analyst. Tools Used: Ansys Mechanical, Spaceclaim
- Automated the preprocessing part of the structural analysis leading to a 10x efficiency improvement.
- Worked on multi-physics analysis like Short Circuit (EMag-Structural), Wind Load (Fluid-Structural) etc.

Master's Thesis

Modelling natural structures GUIDE: DR. SUMIT BASU

May 2018 - Jun. 2019

- Objective: To obtain mechanical model of natural structure as a result of structural optimization applied to constituent materials under given constraints of loading and boundary conditions
- Implemented Method of Moving Asymptotes algorithm in MATLAB for topology optimization
- Designing FEM routine for evaluation of structures generated in each optimization step
- Developing pipeline to generate topologically optimum structure satisfying given constraints

Projects

Multi-Task Learning for NLP tasks TERM PROJECT, MENTOR: PROF. HARISH KARNICK

Jan. 2018 - Apr. 2018

- Developed a deep neural network capable of learning from POS & Chunking tasks.
- Implemented MTL on existing networks by introducing sharing matrix between 2 different task specific network.

ModAV: Modular Aerial Vehicle B.TECH PROJECT, MENTOR: PROF. ASHISH DUTTA

Jul. 2017 - Apr. 2018

- Build modular UAV (different configuration like quadrotor, hexacopter) inspired by DFA project at ETH Zürich
- Designed autonomous docking mechanism for joining the 4 rotor units to 1 control unit
- PX4 autopilot on-board Pixhawk flight controller was used for autonomous navigation
- Proposed method for autonomous landing and take off by adding mono color camera and laser

Stock Market Prediction COURSE PROJECT, PROF. PURUSHOTTAM KAR

Jul. 2017 - Nov. 2017

- Fore-casted the variations of a given market [NASDAQ Composite Index] with 62% accuracy
- Incorporated NIKKEI, RUSSELL and WILSHIRE indices, along with FOREX rates into the feature set for model
- Predicted the values as +ve/-ve using Weighted Voting Ensemble of ARIMA, Kernel SVM and Neural Network

Twitter Mood Visualization SUMMER PROJECT, ELECTRONICS CLUB

May 2015 - Jun. 2015

- Created a dynamic art model for generating artistic pattern using different colored sand describing mood of twitter
- Tweets obtained using Twitter API were classified by Naive Bayes Classifier into different emotion-type.
- Arduino controlled servo motors which pour the sand corresponding to current emotion to create patterns

Courses

IBM Machine Learning Specialization (Coursera)

Robot Motion Planning

Probabilistic Mobile Robotics

Computer Systems Securities

Multi-agent systems

Mechatronics

Data Structures & Algorithms

Intro to Machine Learning

Natural Language Processing

Linear Algebra

Positions of Responsibility

SPoC, AUPTIKS EIIC

Sep. 2019 - Dec. 2020

- Conducted Annual Photography Contest for the employees at the country level.
- Organized photography workshop and drive participation in the EIIC Got Talent.

Book Master, Gymkhana Library PRESIDENTIAL COUNCIL

May 2016 - Apr. 2017

- Led a team of 8 individuals to ensure proper functioning of the library.

Astronomy Event Coordinator TECHKRITI'16

Jan 2016 - Mar. 2016

- Coordinated all the astronomy events like Astro Quiz, WhatsUp etc. in Techkriti'16

Extra Curricular Achievements

2017 **2nd Prize**, Astro Quiz, Techkriti'17

IIT Kanpur

2015 **German Language**, A Grade, Level 1

IIT Kanpur

2015 **Secretary, Association ME**, Managed the conduct of Freshers' night of Y15 ME dept.

IIT Kanpur