# HITARTH CHOUBISA

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## EDUCATION

**University of Toronto** *2018 - 2020*
**Master of Applied Science**, Electrical & Computer Engineering GPA: 4.0/4.0

**Indian Institute of Technology Bombay** *2013 - 2017*
**Bachelor of Technology** with **Honors** in Electrical Engineering Overall GPA: 9.43/10.00
**MINOR** in Computer Science

## TECHNICAL STRENGTHS

**Computer Languages** Python, C++, MATLAB, Verilog, Shell scripting, Prolog, ROS
**Skills & Tools** Machine Learning, Signal Processing, Excel, Quartus, GNURadio

## RELEVANT COURSES

| Field | Description |
|---|---|
| Machine Learning & Maths | Statistical Learning, Statistical Methods for Machine Learning & Data Mining II, Research Topics in Machine Learning, Linear Algebra, Probability & Random Processes |
| Others | Advanced Image Processing, Speech Processing, Adaptive Signal Processing, Digital Signal Processing, Design & Analysis of Algorithms, Algorithms & Data Structures |

## RELEVANT PROJECTS

**NLP driven synthesis of new compounds** Guide: Prof E Sargent

· Using NLP to learn from existing literature and predicting best suited process/conditions for previously unknown compounds.

**Investigating generalization in Deep Neural Networks** Guide: Prof M Erdogdu

· Bayesian Evidence to make the distinction and potentially make predictions about memorization vs learning in NNs

**ML driven discovery of defect free materials** Guide: Prof E Sargent, Prof I Tamblyn

· Using Graph Convolution Networks, developing methodology to discover defect resistant photovoltaic materials

**Video Reconstruction based on Compressive Coded Apertures** Guide: Prof. A.Rajwade

· Used Compressed Sensing(CS) for reconstructing slowly changing videos & compared different algorithms for the same.

**Natural Language Processing for launching successful campaign** Dessa AI Competition

· Using NLP techniques on Kickstarter data to design a successful campaign, **won** the **DESSA AI competition, 2019**

**Genetic Variants Classification** Guide: Prof A Khisti

· Exploration of various machine learning strategies to find the best model for predicting how likely a genetic variant will have conflicting clinical classifications.

## EXPERIENCE

**Sony Energy Devices, Japan (Now part of Murata Mfg. Co. Ltd.)** 2017 - 2018
*Development Engineer*

· Worked on development and deployment of new algorithms for modular communication
· Developed machine learning inspired model for State of Charge Estimation of Li-ion batteries

**Fundamentals of Wavelets, Filter Banks and Time Frequency Analysis** 2016 - 2017
*Teaching Assistant*

· Created question banks and exams for the above-mentioned course, a MOOC offering by IIT-Bombay on NPTEL.