

# Deep Inder Mohan

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## Education

### **International Institute of Information Technology (IIIT)**

*Integrated M.Tech. Computer Science and Engineering*

Bangalore, India

2017-current

– CGPA - 3.71/4.0

– Dean's Merit List for 2017-18, 2018-19, 2019-20, and 2020-21

### **Government Model Senior Secondary School, Manimajra**

*Senior Secondary School, Central Board of Secondary Education (12th grade)*

Chandigarh, India

2015 - 2017

– All-India Examination Marks - 95.2%

– Ranked amongst top 5 students in batch

### **Little Flower Convent School**

*High School, Indian Certificate of Secondary Education (ICSE)*

Panchkula, India

2003 - 2015

– All-India Examination Marks - 98.4%

– 2<sup>nd</sup> position in Punjab and Haryana state

## Skills

### **Programming Languages**

– Python, C, C++, Java, MySQL

### **Tools and Technologies**

– Libraries: PyTorch, OpenNMT, AllenNLP, pandas, scikit-learn

– Vim, Git, L<sup>A</sup>T<sub>E</sub>X, Jupyter, React Native (JavaScript)

## Major Projects

1. **Prejudice Modelling:** Created an agent based model that models inter-group prejudice in society, used it to study the changes/disparities that may arise among groups over time. Research conducted in collaboration with Prof. Shrisha Rao. Paper submitted to IJCAI-21.
2. **TVLA Methodology:** Created a python implementation of the Test Vector Leakage Assessment methodology to analyse power traces from AES-128 implementations for potential DPA side-channel attacks. Work done under Prof. Srinivas Vivek. See technical report [here](#).
3. **Interview Question Generation:** Follow-up question generation for HR interviews using OpenNMT, BERT, and ConceptNET. Research Internship project under Prof. Dinesh Babu Jayagopi. See technical report [here](#).
4. **Unsupervised Glossary Term Extraction:** A project involving explorations into the existing techniques for extraction of glossary terms and their definitions from a document, and proposing a novel unsupervised method for doing the same. See project report [here](#).

5. **NY Taxicab fare predictor:** A model for taxi fare prediction from 55M data records of trips of New York City cabs. See final code and models [here](#).
6. **Prolog and AI:** A project involving study of applications of logic programming languages, specifically prolog, into AI and ML. See project report and code [here](#).
7. **Room Cleaning App:** An app to digitise the hostel room cleaning process at IIITB. Frontend developed using React Native. Self-Learning project.

## Research Experience/Interests

- Completed a research internship under prof. Dinesh Babu Jayagopi at IIIT Bangalore in the field of Natural Language Processing. (*Summer 2019*)
- Completed a qualitative research project under prof. Preeti Mudliar which studies the critical factors for the employability of Indian engineering graduates in IT. See final report [here](#). (*Fall 2020*)
- Completed a semester of research work under prof. Shrisha Rao at IIIT Bangalore exploring the effects and spread of human prejudice through agent based modelling. (*Fall 2020*)
- Currently engaged in a research project under prof. Ashish Choudhury at IIIT Bangalore in the field of secure Multi-Party Computation. Working on hybrid MPC protocols with IT security. Also working as a TA for the Secure MPC NPTEL course taken by prof. Choudhury.

## Awards and Achievements

- **Enlisted in Dean's Merit List**, IIIT Bangalore, for three consecutive years (2017-18, 2018-19 and 2019-20).
- Co-authored an article on the privacy implications of telemedicine in India with prof. V. Sridhar. Published in *Financial Express*.
- Winner of **Yadalam Nanjaiah Shetty Rolling Shield** (Bangalore Inter-College Debate), organised by Rotary Club of Bangalore, 2019.
- Won *2<sup>nd</sup>* place at **Speak Up - Turncoat Debate** at Mood Indigo 2018 (Asia's largest cultural fest), IIT Bombay.
- Won *2<sup>nd</sup>* place at **Hacknight Hackathon** organised by Zense.
- Winner of **Intra College Parliamentary Debate** organised by **Cite IIIT Bangalore**.
- Winner of **Uday Singh Memorial Debate trophy** in 2015.

## Positions of Responsibility

- **Core Member of Zense** (IIIT Bangalore Developers Club): Head of Logistics.
- **Head of DebSoc: Debate Society**, IIIT Bangalore.
- **Core Member** of organising team for **Infin8**, IIIT Bangalore's Techno-Cultural fest.
- **Hosted TEDx IIIT Bangalore** held in March, 2018.
- **Hosted RunBhoomi:** Run for Lake Marathon organised by ELCIA in Bangalore, 2019.
- **Head Student Volunteer** for **IEEE InDIITA Workshop** held in Bangalore, 2019.
- **Hosted Sangam 2020**, IIIT Bangalore's annual alumni meet.