

# Sanjay Thakur

MRL/RLLAB/MILA · MASTERS IN COMPUTER SCIENCE, MCGILL UNIVERSITY  
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## Education

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### Masters of Science in Computer Science

RLLAB/MILA, MCGILL UNIVERSITY

- GPA: 3.55/4.

*Montreal, Canada*

*September 2016 - Expected Jan 2019*

### Bachelor of Technology in Computer Science and Engineering

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY

- GPA: 7.84/10.

*Jaipur, India*

*July 2012 - April 2016*

## Experience in Research/Academia

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### Research Assistant, MRL/RLLab/MILA

SUPERVISORS:: *Dr. David Meger* AND *Dr. Doina Precup*

- To generate sample-efficient and safe controllers,
- in multiple tasks in Imitation Learning set-up.

*Montreal, Canada*

*May 2017 - Expected January 2019*

### Machine Learning Research Intern, Borealis AI

REPORTING MANAGER:: *Yevgeniy Vahlis*

- I analyzed the problem of long term dependencies in the sequential modeling problem.

*Toronto/Montreal, Canada*

*June 2018 - October 2018*

### Teaching Assistant, McGill University

DATABASE SYSTEMS (COMP 421), APPLIED MACHINE LEARNING (COMP 551)

- The tasks involved designing assignments, giving tutorials, and grading the submissions.

*Montreal, Canada*

*Jan.2017-Apr.2017, Sep.2017-Apr.2018*

### Research Intern at LATECE, UQAM, [Profile Link at LATECE](#)

SUPERVISOR:: *Dr. Naouel Moha*

- Developed tools to detect potential anti-patterns during software development and hence lead to better software evolution later.

*Montreal, Canada*

*May 2015 - August 2015*

## Publications/Posters/Talks

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### Sample Efficient Learning From Demonstrations on Multiple Tasks using Bayesian Neural Networks

IMITATION LEARNING AND ITS CHALLENGES IN ROBOTICS, *NeuRIPS 2018*

- Authors::[Sanjay Thakur](#), Herke Van Hoof, Juan Higuera, Kushal Arora, Doina Precup, David Meger

*Montreal, Canada*

*2018*

### A strategical game theoretic based demand response model for residential consumers in a fair environment.

INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS. 2018 APR 30;97:201-10.

- Authors::Pal S, [Thakur S](#), Kumar R, Panigrahi BK.

*Jaipur, India*

*2016*

## Industrial Experience

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### Remote Deep Learning Intern

DATACULTURE INC.

- Designed deep architectures that used cascaded LSTM and feed-forward MLP
- to take actions to minimize or even pre-empt the returns.

*Montreal, Canada*

*May 2017 - June 2017*

## Software Development Intern

Mumbai, India

SUPPLY.AI

June 2016 - Aug 2016

- Developed modules that automate the Exploratory Data Analysis of the datasets,
- enhance communication between Apache Spark based units.
- These modules reduced considerable efforts on repetitive tasks made by the employees.

## Remote Software Development Intern

Mumbai, India

ANALYZE N CONTROL

October 2015 - February 2016

- Developed an android application that invokes certain web-services via SOAP requests
- to notify stockbrokers with latest notifications by regulators like stock exchanges.

## Patents

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### Railway Maintenance Monitoring System

Jaipur, India

[LINK TO PUBLISHED PATENT \(APPLICATION NO. 1098/DEL/2014\)](#)

2014

- Made an application for the detection and maintenance of Gears and safety-equipments in the Railway Stations for the Indian Railways in a centralized manner via GPS Integration.
- Installed in 3 railway stations.

### Intelligent Energy Management System

Jaipur, India

[LINK TO THE INVENTION \(PATENT APPLICATION NUMBER: 2407/DEL/2015\)](#)

2015

- Made a prototype that uses Game Theory and Machine Learning techniques on Demand Side Management, and variable tariff blocks to
- reduce the power consumption bill and variability between power supply and demand.
- It was the central idea behind the startup *SensiYantra* which although didn't work, gave some invaluable lessons.

## Selected Honors & Awards

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### INTERNATIONAL

2015 **SmartMeter**, Runner-ups, GridTech'15 International Conference & Exhibition

New Delhi, India

### DOMESTIC

2013 **NANO**, 3<sup>rd</sup> prize in Android/Web app. development, competition by *Swiftday LLC, USA*

Jaipur, India

2012 **Ship-E-Trophy**, 1<sup>st</sup> prize in the Robotic event, competition at *Neuron'12, MNIT, Jaipur*

Jaipur, India

## Miscellaneous

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2017 **Social Service**, taught TensorFlow and Git in McGill Innovation's *AI for Social Good* Summer Lab.

Montreal, Canada

2013 **Zine Website**, Developed the *website* for Zine.

Jaipur, India

2012-2016 **Zine Profile**, Zine Alumni, Robotics and Research Group of MNIT.

Jaipur, India

2013-2016 **Organizer & Lecturer**, at Annual Zine workshop

Jaipur, India