

# Aditya Jain

<https://adityajain.me>

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## SKILLS

### PROGRAMMING

Python  
Java | Android Programming  
C | C++  
HTML | JavaScript | CSS  
Node.js | Express.js  
SQL  
MongoDB

### DATA SCIENCE | ML

Descriptive Statistics  
Inferential Statistics  
Statistical Modelling  
Regression Algorithms  
Classification Algorithms  
Clustering Techniques  
Ensemble Techniques  
Neural Networks | Deep learning  
Convolutional Neural Networks  
Sequence Models  
Natural Language Processing  
Reinforcement Learning

### CS CONCEPTS

Operating System Concepts  
Data Structures and Algorithms  
Object-Oriented Programming  
Cloud Computing  
Database Management Systems  
Data Mining  
Computer Networks  
Design and analysis of algorithms  
Business Analytics & Intelligence  
High-Performance Computing  
Software Engineering

### SOFTWARE AND TOOLS

Pandas | Numpy  
Matplotlib | Seaborn  
Scikit-Learn  
Tensorflow | Keras  
Pytorch  
MS Excel | Tableau (Basics)  
Linux | Windows  
Git and GitHub

## EDUCATION

### Bachelor of Engineering ( Computer Engineering )

Maharashtra Institute of Technology, Pune | Pune University

Graduation: July, 2018 | Aggregate: **74% (First Class with Distinction)**

### H.S.C. (12<sup>th</sup>)

Central Board of Secondary Education

Completion : May, 2014 | Aggregate : **89.2%**

## EXPERIENCE

### Associate Data Scientist | Cognizant

Sep 2018 - Current | Bengaluru, Karnataka, India

Developing analytical and ML models that assist customers' marketing team in identifying the right and influential population for various outreach programs to improve the overall STAR rating of the MEDICARE plans by addressing measures such as churn probability, mental/physical health decline, bladder control.

### Intern | Heelium Sports Pvt. Ltd.

Oct 2016 - Dec 2017 | Pune, Maharashtra, India

Worked and completed various assignments using **mean stack technologies** like Node.js, MongoDB, Express.js, etc. Also worked on analytics of sales of products, user profiles during this period.

## CERTIFICATIONS

### Deep Learning Specialization | DeepLearning.ai

Completion: June 2019 | Credential: [AMS3W8UNB6PW](#)

Completed topics on fundamentals of neural networks and deep learning, hyperparameter tuning, regularization, optimization methods, convolution neural networks, sequence models, etc.

### Reinforcement Learning Specialization | University of Alberta

Completion: October 2019

Completed topics on foundations of Reinforcement Learning, policy/value iterations, Monte-Carlo learning, Temporal Difference Learning, Deep Q learning and more.

## PROJECTS

### Maintaining Physical & Mental Health using Health Outcome Survey | Cognizant

Used **data analytics & predictive modeling** to train machine learning models on HOS Survey, claims data, prescription data, demographics for predicting members at the **risk of mental & physical health decline**.

### Churn Prediction/Retention Modelling | Cognizant

Used various **statistical & machine learning techniques** to predict members who are likely to get churned and targeting these members using various outreach strategies to prevent churn.

### Brain Tumor Segmentation in MRI using U-Net | [Link](#)

Implemented U-Net from the paper "U-Net: Convolutional Networks for Biomedical Image Segmentation" to **segment brain tumors in given MRI images** of the brain. Achieved 70% IOU on validation data.

### Image Captioning Bot | [Link](#)

Implemented '**merge**' architecture for **image captioning** from the paper "What is the Role of Recurrent Neural Networks (RNNs) in an Image Caption Generator?" using Keras and the Flickr8k dataset.

### Flappy Bird Reinforcement Learning Agent | [Link](#)

Flappy Bird Game trained on a **Double Dueling Deep Q Network** with Prioritized Experience Replay implemented using Pytorch. This agent can be tweaked and trained to master other games also.

## TESTS

### GRE : 324

Verbal : 157

Quantitative : 167

AWA : 4

### TOEFL : 110

Reading: 28

Listening: 28

Speaking: 27

Writing: 27

## LINKS

**Github**:// [adityajn105](#)

**Projects Page**://[Link](#)

**Blogs Page**://[Link](#)

**LinkedIn**:// [adityajn105](#)

**Twitter**:// [@adityajn105](#)

## PERSONAL DETAILS

### NAME

Aditya Jain

### DATE OF BIRTH

10 May 1996

### LANGUAGES

English

Hindi (Native)

### NATIONALITY

Indian

## THESIS | BLOGS

### Convolutional NN for Autonomous Robot Navigation | Junior Year Thesis

Presented my junior year thesis on CNN architectures which can be utilized for autonomous robot navigation tasks. Presented different architectures such as YOLO, U-Nets, ResNet, etc which give best results when used together.

### Attention Mechanism For Machine Translation | Blog | [Link](#)

Blog on **attention mechanism**, its working and mathematics behind it. Also, explained the architecture and how to build a date translation model using attention mechanism from scratch using Keras..

### Policy Optimization in Known MDP Environment | Blog | [Link](#)

Blog on policy optimization techniques such as **Value Iteration** and **Policy Iteration**. Also explained Markov Decision Process, Bellman equation, state-value , and action-value functions.

### Monte Carlo and Temporal Difference Learning | Blog | [Link](#)

Blog on policy optimization techniques **unknown MDP environments** such as MC learning and TD learning.

### Deep Q Learning and Improvements in DQN | Blog | [Link](#)

Blog about building a **flappy bird game reinforcement learning agent** using Deep Q learning.

## ACHIEVEMENTS

- First runner up in Smart India Hackathon 2017 among 300 teams. We had developed an android app to perform biometric authentication of a student during an exam.
- Finalist in Infosys Techzooka Hackathon 2016, had developed an android application to show discounts on the nearby grocery stores.
- Ranked among top 3000 in HackerRank “**Algorithms**” section. I also have a gold badge on SQL and Algorithms on Hackerrank.

## EXTRA-CURRICULAR

- **Organizer and lecturer** in a national level event called “Linuxication” for years 2016,2017 and 2018.
- Member of **MCUG (MIT computer users group)** in 2016, 2017, 2018 which conducted various technical events and sessions throughout the year.
- Member of MCUG **newsletter team** in college for the year 2016.
- **Volunteer** for “Animal Care” & “Save the Environment” campaign for Cognizant Outreach Program.
- “**Joint Event Coordinator**” for a colleges’ technical Event “Texephyr” in the year 2017, where I helped in organizing some coding competitions.