

# Nischal Mahaveer Chand

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## EDUCATION

### NORTHEASTERN UNIVERSITY, Boston, MA

College of Computer and Information Science, GPA: 3.8/4.0

Sept. 2017 - present

*Candidate for Master of Science in Data Science*

Expected graduation: August 2019

Related Courses: Supervised Machine Learning, Unsupervised Machine Learning and Data Mining,  
Information Visualization, Natural Language Processing, Statistics for Bioinformatics

*Positions:* Graduate Teaching Assistant for DS5110 (Introduction to Data Processing and Management)

### ALLIANCE UNIVERSITY, Bengaluru, India

College of Engineering and Design, CGPA: 3.4/4.0

Aug. 2013 - June 2017

*Bachelor of Technology in Computer Science Engineering*

Related Courses: Data Mining and Data Warehousing, Big Data Analytics, Design and Analysis of Algorithms

Activities: Coordinator of CodeWars, Member of DevMetric, Member of Linux Club

## TECHNICAL KNOWLEDGE

<b>Languages:</b>	R, Python, Java, C/C++, SQL
<b>Python Related:</b>	numpy, pandas, matplotlib, sklearn, scipy, bokeh, plotly, PyTorch, Tensorflow, Keras, NLTK, sklearn, seaborn
<b>R Related:</b>	tidyverse, ggplot2, caret, shiny, randomforest, kableExtra, Rcpp, haven, leaflet, r2d3, parallel
<b>Tools and IDEs:</b>	git, Docker, flask, Weka Explorer, RStudio, Jupyter Lab, IPython Notebook
<b>Markup Languages:</b>	LaTeX, RMarkdown, Markdown, HTML, XML, JSON

## WORK EXPERIENCE

### Marcus Institute for Aging Research, Hebrew SeniorLife, Roslindale, MA

July 2018 - Dec 2018

*Co-op Student/Junior Data Scientist*

- *AD Supplement:* Performed regression analysis in R, on patient data to help researchers find possible links between cerebrovascular mechanisms and Alzheimer's related dementia. Actively communicated results and findings to the director of Marcus Institute, and researches at Beth Israel Deaconess and Harvard Medical School.
- *Smartphone project:* Created data pipeline in R to collect and process smartphone sensor data (accelerometer and gyroscope raw signal data). Used various signal processing techniques to generate meta-data summarizing patient walk patterns to enable researchers to quickly and effectively access patients behaviour and find interesting patterns.
- *shinyMRI:* Created an MRI image viewer in R Shiny, primarily to speed up Alzheimer's diagnosis for inhouse study.

### untrodden labs, Delhi, India

Aug. 2016

*R&D Intern*

- Developed chatbot in Python using NLTK, for basic user interaction like weather reporting and reading daily news.
- Tested and debugged speech recognition modules using Google Speech Recognition API in Python.

## ACADEMIC PROJECTS

### MURA challenge - Bone X-Ray Deep Learning Competition

Jan. 2019 - present

- Exploring deep learning techniques to classify bone x-ray images as normal or abnormal, using sklearn and PyTorch in Python. Also creating a web-client in Python using Flask to interactively visualize activations for various layers using D3 and Javascript.

### NL2code - Natural Language to code generator

Jan. - Apr. 2018

- Created a neural machine translation system to convert single line comments to code in Python using Theano and TensorFlow. The final model achieved a BLEU score of 74.3, an improvement over our Base model score of 73.2.

### Flashlight - Property Assessment Visualization for the City of Boston

Oct. - Dec. 2017

- Created R Shiny Application that helps users visualize various aspects of property assessment for the city of Boston, using R for data visualization and interactive dashboard, along with Python for data cleaning and data transformation.

### Movie Recommendation System

Feb. - June 2017

- Implemented a Recurrent Neural Network using TensorFlow in Python to recommend movies to a user. By analysing the sequence of movies reviewed, we were able to achieve high scores both in accuracy and peer review.

## PERSONAL PROJECTS

### Ames Housing Price Prediction

Oct. - Dec. 2016

- Created regression models in Scikit-Learn and neural models in TensorFlow to predict housing prices in Python.
- Best submission one of top 20% on Kaggle public leaderboard.