Nischal Mahaveer Chand

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EDUCATION

NORTHEASTERN UNIVERSITY, Boston, MA
College of Computer and Information Science, GPA: 3.76/4.0 — Sept. 2017 - present
Candidate for Master of Science in Data Science — Expected graduation: August 2019
Teaching assistant positions: DS5110 (Spring 2019) and CS6220 (Summer 2019)

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

TECHNICAL KNOWLEDGE

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

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 high-dimensional data to find links between cerebrovascular mechnisms and Alzheimer's related dementia. Actively communicated results and findings to senior researchers.
- *Smartphone project:* Migrated existing data processing pipeline from Matlab to R. New pipeline responsible for fetching sensor data from central servers, processing data and generating metadata based on walk analysis using signal processing techniques, storing data and metadata on local MySQL server, and generating dynamic patient assessment reports.
- *shinyMRI:* Created a R-based "Shiny" module to visualize and dive-into 3D and 4D MRI imaging data within a web-browser

ACADEMIC PROJECTS

Dynamic visualization of mass spectrometry imaging experiments in R — May. 2019 - current

- On-going project under Dr. Kylie Bemis (author of "Cardinal" package) to enable dynamic visualization of MSI experiments and analysis results within *Cardinal* using R "Shiny" dashboards and D3.js.

MURA - Bone X-ray image classification and visualization project — Jan. 2019 - Apr. 2019

- Trained hierarchical CNN model to classify X-ray images as normal or abnormal using PyTorch and torchvision.
- Created dynamic visualization to show activation mapping using GradCAM technique to *see* what our model is seeing to make a prediction, and to visualize the change in region of focus over training iteration using D3.js and Javascript.
- Created a Python rest API service using Flask to provide real-time prediction and activation maps for uploaded images.
- Deployed models and visualization to Amazon EC2 instance and hosted website for users to interact with.

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.

HONORS AND ACHIEVEMENTS

- Presented *MURA visualization tool* at The Northeastern University Visualization Consortium. — Apr. 2019
- Honorable mention for *shinyMRI* in RStudio's first Shiny contest. — Apr. 2019
- Graduate speaker for TechTalks at Grad TechDay, Khoury College. — Mar. 2019
- Coordinated and organized CodeWars, a 24-hour hackathon as part of university fest at Alliance University. — Oct. 2015