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)
Activities: Speaker for Khoury Graduate TechTalk, Presenter at NUViz 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-dimentional 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 patient sensor data from central servers, processing and generating metadata (walk analysis using signal processing techniques), storing data and metadata on local MySQL server, and generating dynamic patient reports.
- *shinyMRI:* Created a R-based "Shiny" module to visualize and dive-into 3D and 4D MRI imaging data within a web-browser. The package received an Honarable metion in RStudio's first Shiny contest (April 2019).

ACADEMIC PROJECTS

Dynamic mass spectrometry imaging data visualization in R   May. 2019 - current
- On-going project under Dr. Kylie Bemis (author of "Cardinal" package) to enable dynamic visualiztion of MSI data 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 the Stanford MURA dataset.
- Created dynamic visualization to show activation mapping using GradCAM technique to *see* what our model is seeing to predict make a prediction and visualize the change in region of focus over training iteration using D3.js and Javascript.
- Deployed models and visualizations on EC2 instance and created a Python rest API using Flask to provide real-time prediction and activation maps for uploaded images.

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

- Coordinated and organized CodeWars, a 24-hour hackathon as part of university fest at Alliance University.   Oct. 2015
- Volunteer for planting 300 saplings as part of reforestation drive in Shivaganga Hills, India.   Sept. 2014
- Volunteer for collecting disaster relief supplies for the Uttarakhand Floods of 2013.   Sept. 2013
- Awarded Karnataka state scholarship, covering 70% tuition fee for undergraduate study at Alliance University.   2013 - 2017