Nischal Mahaveer Chand

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EDUCATION

NORTHEASTERN UNIVERSITY, Boston, MA
Khoury College of Computer Sciences, GPA: 3.79/4.0 Sept 2017 - Aug 2019
Master of Science in Data Science
Related Courses: Supervised Machine Learning; Unsupervised Machine Learning and Data Mining;
Information Visualization; Natural Language Processing; Statistics for Bioinformatics; Algorithms
Activities: - Founding member of the Khoury Data Science Hub - Data science community at Khoury College;
- Selected speaker for GradTech Day (Tech talk on my work with Alzheimer's research at the Marcus Institute);
- Presenter for NUVis (Presented MURA classification visualization to visualization experts at NEU);

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

Languages:	R (proficient), Python (proficient), SQL (intermediate), HTML/JavaScript (intermediate), Java (experienced)
Python Related:	numpy, pandas, matplotlib, sklearn, scipy, TensorFlow, XGBoost, PyTorch, Keras, NLTK
R Related:	tidyverse, caret, shiny, kableExtra, r2d3, RMarkdown
Tools and IDEs:	git, Docker, flask, Weka Explorer, RStudio, Jupyter Lab, IPython Notebook, Tableau

WORK EXPERIENCE

Khoury College of Computer Sciences, Northeastern University, Boston, MA Jan 2019 - Aug 2019
Graduate Teaching Assistant
- DS5110 - Introduction to Data Management and Processing (Spring 2019)
- CS6220 - Unsupervised Machine Learing and Data Mining (Summer 2019)

Marcus Institute for Aging Research, Hebrew SeniorLife, Roslindale, MA July 2018 - Dec 2018
Co-op Student/Junior Data Scientist
- *AD Supplement*: Performed regression analysis on high-dimensional clinical trials data in R to obtain valuable insights that directly affected active Alzheimer's research goals. Actively communicated results to senior researchers and the director.
- *Smartphone Lab project*: Built and migrated data gathering and processing pipeline to fetch, process, and store inertial motion sensor data onto local MySQL server in R, improving data gathering speeds by 13% and cutting licensing costs.
- *shinyMRI*: Built R "Shiny" powered application and module to visualize 3D and 4D MRI images within a web-browser, improving diagnosis speeds for in-house Alzheimer's research. Application received honorable mention by RStudio, Inc.

ACADEMIC PROJECTS

CardinalVis - Dashboard for dynamic visualization of Mass Spectrometry Imaging (MSI) experiments May 2019 - current
- Created and tested R "Shiny" modules to help non-technical researchers analyse and visualize MSI experiments in R.
- Application cuts down on research time by supporting fast and iterative exploration of MSI experiments in a web browser.

MURA - Bone X-ray image classification and visualization project Jan 2019 - Apr 2019
- Trained hierarchical CNN models to classify X-ray images as normal or abnormal using PyTorch and torchvision in Python.
- Created dynamic visualization of activation mapping over training iteration for x-ray images using D3.js and Javascript.
- Created RESTful API service to provide real-time classification and activation maps using Flask-RESTful in Python.
- Deployed application, models, and visualization to Amazon EC2 instance.

NL2code - Natural Language to Python code generator Jan 2018 - Apr 2018
- Scraped open-source Python repositories to gather training data of code-comment pairs using beautifulsoup in Python.
- Performed semantic analysis and canonicalization of raw data using NLTK and Python.
- Trained and tested neural machine translation models using TensorFlow in Python and in Theano.
- Improved BLUE score over base paper by augmenting semantic information to feature embedding.

Flashlight - Property Assessment Visualization for the City of Boston Oct 2017 - Dec 2017
- Created dashboard to visualize various aspects of property assessment values using R "Shiny" and Leaflet in R.
- Geocoded missing coordinate values using Open Address dataset and Google Maps Geocode API in Python.
- Created Python scripts to automate conversion of Zillow's shapefiles to GeoJSON format and gathering of meta-data.