Nilesh Hegde

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Education

Khoury College of Computer Sciences (Northeastern University) — Boston, MA
Master of Science in Artificial Intelligence — *GPA - 3.94/4.00*

B.M.S. College of Engineering — Bengaluru, India
Bachelor of Engineering in Computer Science and Engineering — *GPA - 3.74/4.00*

Technical Skills

Languages/API/Databases: Python, C, SQLite, PostgreSQL, PySpark, MongoDB, HTML/CSS
Libraries: PyTorch, TensorFlow, nltk, gensim, pandas, NumPy, Scikit-learn, Matplotlib, seaborn, Plotly, Keras, SciPy

Internships

Data Science Intern — June 2020 – Jan 2021
Unilever — *Bengaluru, India*

- Experimented with different demand forecasting engines for understanding impact of various levers such as Pricing, Media Spends, Distribution, Promo etc. on Secondary sales at different Hierarchy levels based on business context. Used Prophet with additional regressors and tree based methods alongside SHAP values for model interpretability.
- Identified Sales Potential of Rs 300 Cr. through a pan-India analysis for potential villages to target for expansion. Attained more accuracy at 10% the cost of existing vendor solution.
- Developed adhoc modules and scripts for EDA for ease of use by business.

Teaching and Research

Graduate Teaching Assistant — Fall 2022, Spring 2023, Fall 2023
Khoury College of Computer Sciences - DS 2000/DS 2001 (Programming with Data) — *Boston, MA*

- Monitor student progress and performance, proactively addressing academic concerns and providing tailored guidance in class of 500+ students.
- Grade and provide constructive feedback on assignments on a weekly basis to over 70+ students.
- Host office hours four times per week to address student questions and solidify data science concepts.
- Assist students in practicum and provide help and guidance in a lab of 40+ students

Graduate Research Assistant — Summer 2023
Khoury College of Computer Sciences - Maxwell's Research Group (Log Space Exploration) — *Boston, MA*

- Explored the topics of log color space and color constancy.
- Reporduced results of Fast Fourier and Convolution Color Constancy in Python.
- Reviewed over 25+ papers on color constancy and reported metrics/results on different datasets.

Selected Projects

Fun with MNIST | *Python(tensorflow, opencv, pillow, tkinter, numpy, matplotlib)*

- Built and trained a network to do digit recognition using the MNIST data base.
- Recreated a Sudoku Grid by reading an image and recognising the digits with help of trained model.
- Created digits by training a GAN on MNSIT data.
- Performed transfer learning by re-purposing the trained model to recognize Greek letters.

Transformer-based fake news detection | *Python(pytorch, sklearn, pandas, numpy, sklearn, seaborn, matplotlib)*

- Obtained a pre-trained BERT model to use as the base of the model.
- Fine-tuned the BERT Model to learn fake news detection.
- Out performed machine learning models such as Logistic Regression, SVM, Random Forest, Multinomial Naive Bayes and Decision Tree classifiers.

Selected Publications

Path Trajectories in 2-Dimensional Motion Planning
Nilesh Hegde, Sumukha Nadig, Jyothi Nayak (Awarded Best Paper at ICMISC-2020)*