Thirunaavukkarasu Murugesan

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EDUCATION

Stevens Institute of Technology | Hoboken, United States   **May 2023**
Master of Science in Computer Science
Relevant Course: Knowledge Discovery and Data Mining, Big Data Technologies, Web mining, Database Management Systems, Applied Machine Learning, Deep Learning, Enterprise Software Architecture and Design and Algorithms
Graduate Research Assistant: Working as Research Assistant under Professor Jingyi Sun
Technology and Skillset: Web Selenium, Web mining, NLTK, Text analysis, Topic modelling, Clustering

Anna University | Chennai, India   **May 2016**
Bachelor of Engineering in Computer Science and Engineering
Relevant Course: Web technology, Design and analysis of Algorithms, Data structures, Object oriented Programming, Artificial Intelligence

SKILLS

Languages/Frameworks/Technologies: Java, Python, JavaScript, Hadoop, C++, R, HTML5, Flask, Django, React, SQL

Tools: Advanced Microsoft Excel (Macros, Pivot Tables, Lookup, VBA), Word, PowerPoint, Tableau, Microsoft SQL server, PostgreSQL, MySQL, MongoDB, Cassandra Microsoft Access, Jupyter, Git

ML Libraries/Models*:* Sklearn, Tensorflow, Keras, SciPy, NLTK, Spacy, GLM, Regression, Decision Tree, SVM, Naïve Bayes, Bayesian Modeling, Neural Network, Random Forest, Clustering, Classification

Knowledge Areas and Skills: Problem-solving ability, Analytical and quantitative skills, Competitive programming, Strong communication skills, System design, EDA, Data Cleaning, Visualization, Code deployment, ML Pipelines

CERTIFICATIONS

Deep Learning Specialization, Post Graduate Program in Machine learning, Python for Everybody Specialization – University Of Michigan, SQL for Data Science - UC Davis, Tableau - Lynda, R Programming

WORK EXPERIENCE

HTC Global Services   **Feb 2017 – July 2021**
Software development Engineer   **Chennai, India**
- Managed and worked in Tax applications with large DB2 tables to generate reports and send outbound files to different areas, fetching data using IBM data studio by writing DB2 SQL queries
- Worked on transforming data intense application from Mainframe to AWS – worked on and changed large dataset and DB2 tables to change the job flow of the database operations required for the transformation
- Developed dashboard using Flask and Chart.js, to generate graph for live data

ACADEMIC PROJECTS

Recommender system – Movie recommendation system – KNN, SVD, TD-IDF Vectorization and Cosine similarity
- Leveraged movies' database information to analyse whether a movie can be recommended to a user and movies that are similar to each other based on description provided
- Applied methods like Content based, SVD and Collaborative filtering to improve and enhance Recommender's performance and deployed in Herokuapp.com

Stock Market Price Prediction - **Time Series Forecasting - LSTM**
- Normalized and standardized stock prices dataset and modeled data on LSTM with sigmoid activation function
- Measured loss of model in mean squared error (RMSE) and predicted price of stock at any given date (RMSE score 9.725)

Skills Match – Selenium, NTLK and BERT
- Scraped the Job data - Company, Location, Date, Job description from LinkedIn using selenium for a given job position keyword
- Used PDF Miner and NLTK python package to scrape the skillset from the resume and Job descriptions, cleaned the text data and applied text matching algorithms like Cosine similarity and BERT to find appropriate jobs for a given profile/resume

PageRank on Wikipedia pages - Hadoop
- Constructed a page rank algorithm to decide the importance of each webpage by assigning weighting value based on any incoming link to those webpages
- Implemented MapReduce to rank Popular Wikipedia pages with Iterative MapReduce. Used Amazon EMR & S3 as remote platform

Notes Application – React and Django
- Used various libraries like djangorestframework, django-cors-headers, pytz, sqlpars, rest_framework. React serves as the frontend/client-side framework, handling the user interface and getting and setting data through requests to the Django backend, which is an API built using the Django REST framework
- Used React function components and made use react Hooks functions to hook into react state and life cycles from function components
- Implemented CRUD operations on the application. The router class was used to returns the list of all items in the application, where create and read operations are performed and used ID to perform update and delete

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

MAM College of Engineering   **August 2014 - May 2016**
- Founded an Incubation club to uplift budding entrepreneur as an active member of Young Indians. Approached venture capitalists to fund start-ups
- Conducted workshop to encourage coding among junior students as an active member of Computer Society of India Student head of College

Montfort School   **July 2011 - Feb 2012**
- Led school football team for an academic year and represented the school in zonal sports meet