# Neel Suthar

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### **EDUCATION**

Master of Science, Computer Science The University of Texas at Arlington Bachelor of Engineering, Computer Engineering Gujarat Technological University Jan 2020 - Dec 2021 GPA: 3.85 Aug 2015 - May 2019 GPA: 8.14/10

### **SKILLS**

Programming Langueges: Python, Java, JavaScript, PHP, C/C++

Web Development: Python Flask, Django, React, Redux, HTML, CSS, Bootstrap, Bulma, JQuery, Laravel, WordPress, Node.js, Express.js, Spring framework, Passport.js, REST APIs, Apache Kafka, GraphQL

Database: SQL (MySQL, Microsoft SQL server), NoSQL (MongoDB, Redis)

Cloud/DevOps: Git, Heroku, IBM Bluemix, AWS(Amazon Web Services), MS Azure, Docker, jUnit, jMetre, PyUnit Data Science/Analytics: NumPy, Scikit-Learn, Pandas, Matplotlib, Tensorflow, Seaborn, PyTorch, NLTK, OpenCV, Tableau, Keras

Other: Windows, Unix/Linux Platform, Microsoft Office, Object-oriented programming, Problem-solving, Test-driven development, Software Design patterns, Agile development methodology, Software development lifecycle

### **EXPERIENCE**

## Graduate Teaching Assistant/Webmaster, The University of Texas at Arlington

Jan 2021 - Present

- Managing and updating the potential information for a website of the Department of Marketing, College of Business.
- Helping department faculties and Ph.D. students in their day to day tasks and assessing any technical issues.
- Maintaining the electronic devices and other kinds of resources provided to faculties and students via department.

### Software Developer, Writopedia Consultants Pvt. Ltd.

May 2019 - Oct 2019

- Designed and implemented a database to keep track of the most liked articles of various hot topics for SEO purposes.
- Developed many blog-post-oriented pages for websites using React.js, Flask, Django, HTML, PHP, and WordPress API.
- Built a PoemDiary app for iOS with an authentication feature for privacy using Expo and React Native framework.

#### Machine Learning Intern, eInfoTechs IT Solution

Aug 2018 - Apr 2019

- Reduced training time by developing custom functions to clean and process data gathered from the various dataset.
- Trained various ML models for sentiment analysis of tweets, animal detection, and signature extraction from a document.
- Developed and deployed ML web apps related to brain tumor detection, motion detector, and crowd control on AWS.

### Web Developer, Divine IT Hub

Jan 2018 - Jun 2016

- Built custom reusable, responsive, and intuitive components single-handedly using scalable framework React.js.
- Improved consistency of existing apps by replacing commonly used fields with attractive reusable components.
- Enhanced existing database functionalities by implementing backend services using Node.js to be used with many apps.

### **PROJECTS**

## Rating Predictor on Game Review (Python, NumPy, Pandas, SVM, sklearn, Python Flask, AWS EC2)

- Developed a Flask app to predict the rating of a given review on a scale of 1-10 and deployed it on AWS EC2 instance.
- Developed a function to clean and format the reviews and ratings from a BoardGameGeek Reviews(13m) dataset.
- Vectorized reviews using sklearn TfidfVectorizer for model training and normalized their ratings to gain better accuracy.
- Trained the data using sklearn LinearSVC then saved the model as well as vectorizer using pickle to use for prediction.

## Movie Recommendation System (Python, Pandas, NumPy, The Movies Dataset)

- Built a system to recommend several movies to a user based on their input movie with help of The Movies Dataset.
- Developed a logic to identify and convert unique genres, cast, and crew information into binary format for each movie.
- Built a distance function to calculate the similarity scores between two movies using genres and cast information.
- Developed kNN from scratch using distance function to get neighbors based on similarity; got highly accurate results.

## Object Counting on webcam Object Detection (Python, keras, TensorFlow, OpenCV, pandas, YOLOv3)

- Trained object detection model with the help of MS COCO dataset using YOLOv3 object detection system and Keras.
- Created image processing steps to prepare an image for prediction using Keras and used Matplotlib to display output.
- Built a logic to process the live webcam feed for prediction, identifying objects, and bounding boxes in a live frame.
- Made detection process easy by using classes array to identify specific objects in a frame; can be tweaked easily.

### kNN classifier from scratch (Python)

- Built kNN classifier from scratch with different distance measures and custom data cleaning, preprocessing functions.
- Applied kNN on breast cancer, car, and hayes roth dataset and was able to achieve higher accuracy than WEKA.