Heet Madhu

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Objective

An internship opportunity that will allow me to utilize my knowledge and problem solving skills to further develop my abilities in the field of computer science.

Education

Master of Science in Computer Science Dec 2020
The University of Texas at Arlington **GPA**: 4.0/4.0

- Courses: Design and Analysis of Algorithm, Data Mining, Discrete Structure, Artificial Intelligence.

Bachelor of Engineering in Computer Engineering May 2018
Gujarat Technological University, India **CGPA**: 8.53/10.0

- Courses: Object Oriented Programming in C++, Object Oriented Programming with Java, Advance Java, Data Structures, Algorithms, Operating System, Computer Networks, Theory of Computation, Web Technology, Compiler Design, Artificial Intelligence.

Technical Skills

Programming Languages: C, C++, Java, Python
Web Technologies and Database: HTML, CSS, JavaScript, PHP, MySql, Sqlite, Oracle, MogoDB
IDE/Tools and Libraries: Android Studio, Eclipse, Jupyter Notebook, PyCharm, Git, Keras, Tensorflow, TensorflowLite, SNPE, Mace, OpenCV, Sklearn, Pandas, Numpy, Nltk, Flask, Google Cloud
Domain Knowledge: Machine Learning, Deep Learning, Computer Vision, Data Structures and Algorithms, Database Design, Cloud Computing, NLP concepts.

Projects

Search Engine and Recommendation System

- Implemented search engine on movies dataset that calculates **TF-IDF** vectors and finds results using cosine similarity in **python** and adopted the broadcasting feature of **numpy** for efficient performance. Used lemmatization, inverted index, stop-words removal, etc. techniques to improve results.
- **Collaborative item based** recommendation system that can recommend movies to the user based on their history. Cosine similarity between movies user liked and other movies are calculated to recommend movies.

Genre Classification

- Movies description classification to movies genres. Implemented multinomial **Naïve Bayes** classifier for classifying description using **python** and **numpy**. Used movie descriptions to calculate the probability of every word for all classes.

Gesture Controller

- Developed hand gesture recognizer that can perform most of the mouse functions such as mouse move, left click, right click, scroll in **python**. Used computer vision techniques and algorithms of **opencv** library to identify different gestures.

Table 'n' Time

- Restaurant table booking **android** application where user can book tables and at the admin side restaurant can see bookings. Designed database in **mysql** and APIs in **php.**

Professional Experience

Software Developer GeekyBee AI PVT LTD Aug 2018 – Nov 2018

- Technologies: Python, Java, Android, Tensorflow, TensorflowLite, SNPE, Mace, OpenCV
- Involved in developing and optimizing neural network models to achieve good performance on mobile applications.
- Worked with **MobileNet SSD, YOLO, PoseNet**, etc. **neural network** architectures.
- Slashed object detection time for an image **40%** by changing architecture and applying optimization techniques such as quantization for real time performance.

Activities and Achievements

- **Certifications:** Machine Learning by Stanford, Deep Learning Specialization on Coursera, Tensorflow for Artificial Intelligence on Coursera.
- Participated in **HackUTD** and build an android application that can help visually challenged people to recognize objects in their path. Used SSD Mobilenet trained on MS Coco dataset.
- Represented college in Chess competition and secured 1st runner up title in inter college chess competition.