PARAS SIBAL

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EDUCATION

University of Southern California, Los Angeles, CA

M.S. Computer Science with Data Science specialization, January 2021- December 2022 GPA: 3.0

- Related Courses: Analysis of Algorithms, Foundations of Artificial Intelligence, Machine Learning, Database Systems, Advanced Natural Language Processing, Foundations of Data Mining

SRM Institute of Science and Technology, Chennai, India

B. Tech, Software Engineering, July 2016- May 2020 CGPA: 9.03 (Scale of 10) Eq. GPA: 3.9

- Related Courses: Data Structures, Object-Oriented Programming, Algorithm Analysis and Design, Software Engineering Principles, Database Management System, Operating System, Software Architecture and Design, Computer Networks, Software Project Management, and Software Verification and Validation.

TECHNICAL SKILLS

- **Programming Languages:** Python, C++, R
- **Database Technologies and Related Languages:** MySQL, HIVE SQL, MongoDB
- **Data Science Skills:** Machine Learning, Deep Learning, Tensorflow, Keras, Scikit-learn, Hadoop, Data Mining

WORK EXPERIENCE

USC Information Technology Services **Los Angeles, CA**

Technical Support February 2022 - Present

- Coordinated with the Learning Environment team to respond to technical issues across the USC campus.
- Provided technical service to professors and other USC staff having technical issues during and outside of class.
- Manage ITS resources and assist other student workers.

iNeuron Intelligence **India**

Deep Learning Project Intern December 2020 - March 2021

- Designed an automated system to interpret abnormalities and specific diagnoses (ACL tears and meniscus tears) in the knee to assist high-risk patients and make an accurate diagnosis.
- Worked closely with technology experts, and assisted them in designing the DenseNet and U-Net model using TensorFlow and Keras and optimization algorithm.
- Assisted in testing the entire training pipeline before deploying the model to its cloud destination.

National University of Singapore **Singapore**

Big Data Analytics Project Intern June 2018-July 2018

- Worked with NUS professors and project team to investigate the factors responsible for the bank losing potential customers using Artificial Neural Networks and compared results using different techniques to find the best model possible.
- Accomplished an accuracy of 84.4% by designing a Resilient Back-Propagation Algorithm and ADAM optimizer using R programming.

Hewlett Packard Enterprise **Singapore**

Hadoop System Administration Project Intern June 2018-July 2018

- Worked with HPE staff and project team to develop Hadoop clusters and Cloudera Manager (Version 5.3) for configuring Big Data and Hadoop System with HDFS, Yarn, HIVE, Spark, and Ozzie services on different servers.
- Designed HIVE SQL queries for different datasets to carry out numerous database-related operations.

ACADEMIC RESEARCH AND PROJECTS

A Multi-Model Approach to Speech Emotion Recognition February 2022 - Present

- Working on speech emotion recognition for the raw audio dataset.
- The model will convert speech-to-text and use text semantics as features, in addition to the model with features directly obtained from a speech as spectrograms. The word embedding layers and pre-trained words vector will be used along with parallel biLSTM.
- The projects aim to combine the two models either by concatenating the character features in a merging layer or using an extra model to fuse the two results with multi-sensor data fusion techniques that result in a multi-model.

POS tagger for Italian, Japanese, and Hindi Language January 2022 - February 2022

- Designed a Hidden Markov model part-of-speech tagger for Italian, Japanese, and Hindi languages on tokenized and tagged training data and then used the model to tag new data.
- Implemented methods to handle unknown vocabulary and unseen transitions in the test data using the Viterbi algorithm.
- Achieved a performance accuracy of 95% for the Italian language, 92.56% for the Japanese language, and 92.85% for the Hindi language using the designed tagger.

A Smart Assistant for visually impaired July 2020 - September 2020

- Developed a design-level implementation with a stimulation code to assist the visually blind.
- Designed a smart headband for a visually impaired audience to assist them in detecting objects such as walls, cars, poles, stones, etc., using YOLO object detection.
- Designed the entire software specification and design document with functional and non-functional requirements, use cases, class diagrams, sequence diagrams, state diagrams, component diagrams, deployment diagrams, etc.

Recommendation System for Establishing New Business Using Geospatial Clustering for Multiple Reference Point

National Conference on Artificial Intelligence and Intelligent Information Processing(NCAIIIP '20), Manuscript under publication, Patented under SRM University Jan 2020 - April 2020

- Designed an end-to-end application for entrepreneurs to help them find optimal locations to establish their new businesses and maximize their profits.
- Developed a custom clustering algorithm using geospatial data analysis and a recommender system that recommends optimal location in any given city, taking various factors such as competitors, population, etc., into consideration.
- Data was generated using Google API, FOURSQUARE API, and REST API.