SHREERAM NARAYANAN

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EDUCATION

University of Southern California — ***Los Angeles, CA*** — **May 2023**
Master of Science, Electrical and Computer Engineering — **GPA: 3.85**
Sardar Patel Institute of Technology, Mumbai University — ***Mumbai, India*** — **Sept 2020**
Bachelor of Engineering, Electronics and Telecommunications — **CGPA: 8.69/10**

TECHNICAL SKILLS

- **Programming Languages and OS:** Python, C, C++, Java, JavaScript, HTML, CSS, SQL
- **Libraries and Frameworks:** NumPy, Scipy, Pandas, Scikit-Learn, GluonCV, Apache Mxnet, PyTorch, TensorFlow, Matplotlib, Keras, OpenCV, Flask, OpenCV, NLTK, AngularJS, NodeJS, Apache Spark, Apache Hadoop
- **Databases, Platforms and Cloud Technologies:** MySQL, Docker, AWS (EC2, S3), GCP, MongoDB, DynamoDB

PROFESSIONAL EXPERIENCE

Software Development Engineer Intern, Amazon — ***Irvine, CA, USA*** — **May 2022-Aug 2022**

- Built a web-based UI to serve as a base for tooling to be created for common services workflows
- Engineered solutions in services team at Amazon Game Studios (AGS) and developed a tool that allows team members, retailers, and marketing analysts to request a Steam key for the New World game. Also, designed an admin dashboard that lists all current requests and allows an admin to approve/reject the disbursement of a Steam key

Machine Learning Engineer Intern, Tericsoft Technology Solutions Pvt. Ltd — ***Hyderabad, India*** — **Jan 2021-Jul 2021**

- Collaborated with team on a video analytics project for compliance purposes by performing mask and safety-vest detection tasks on CCTV Feeds. The object detection models were trained using Nvidia Transfer Learning Toolkit (TLT), deployed using Nvidia Deepstream intelligent video analytics toolkit and data was exported using Apache Kafka framework
- Led a project involving developing a spell-check application based on Levenshtein Algorithm to correct names of brands incorrectly entered by data entry engineers. The Application was deployed using Flask API on a Dashboard
- Implemented a data science project involving getting insights on customer behavior based on purchase history and interactions of customers with products by employing Apriori Algorithm and built a recommendation system using Collaborative Filtering

Deep Learning Engineer Intern, Segmind Solutions Pvt. Ltd — ***Bangalore, India*** — **Jun 2020–Dec 2020**

- Contributed towards integrating semantic segmentation networks like Feature Pyramid Network (FPN), LinkNet, object detection networks like FasterRCNN, and instance segmentation networks like MaskRCNN in CNN Research Abstraction Python Library (CRAL)
- Part of development team of a Client Python Library called Segmind Track to enable logging training metrics, system metrics (CPU & GPU), hyper parameters and artifacts of deep learning experiments on a tracking site
- Integrated PyTorch Lightning callbacks into the Segmind Track library to enable users to track performance of a model trained using PyTorch Lightning Deep Learning Framework

ACADEMIC PROJECTS

Emulated Distributed File System: *Technologies Used:* Map Reduce, MongoDB, Flask, HTML, CSS

- Built a Distributed File System (DFS) like Hadoop DFS and implemented commands like mkdir, ls, cat, rm, put, getPartitionLocations, readPartitions. Utilized MongodDB and MySQL to store metadata and actual data of the file respectively
- Developed a web application which takes the above commands as input from user and displays the results on a web page

Code Summarizer - Encoder-Decoder Model for summarizing code: *Technologies Used:* PyTorch, Transformers, Neural Networks

- Designed an encoder-decoder architecture for generating short summaries describing the functionality of a code snippet
- Obtained a bleu-4 score of 15.96 and an EM score of 0.4759 on the test set

Trip Expense Management Application: *Technologies Used:* NodeJS, GraphQL, HTML, CSS

- Developed a web application which manages expenses for members of a trip, split and settle expenses for a specific trip
- The application also gives an overview of a destination using Google Places API and allows users to upload media for a trip

TrojanMap - Using Graph Algorithms to build a map application: *Technologies Used:* Algorithms, Data Structures, C++

- Implemented a Map application using C++ which involved features like finding coordinates of a location on the map, calculating the shortest path between two locations, finding nearby places from a given location
- Used BFS, DFS, Topological Sort to execute features for the application

Generating Monet Style Art using Generative Adversarial Networks: *Technologies Used:* PyTorch, CycleGAN, Neural Networks

- Designed a modified CycleGAN architecture model for generating Monet Style photos from Real ones and implemented it on the Monet2Photo Dataset
- Utilized PyTorch framework for training the generator and discriminator CNN models and achieved a Memorization-informed Fréchet Inception Distance score of 55.97 and ranked 48th in the Kaggle Competition titled “I’m something of a painter myself”

LEADERSHIP

- Led team of four in competition **IICDC-Texas Instruments** organized by **DST** and reached the finals (Top 30) **Aug 2018-Jun 2019**
- Member of Rotaract Club of Thane North End (RCTNE) and volunteered for Rotaract events such as blood donation camps, tree plantation drives, teaching underprivileged children **Jun 2016-Jun 2017**