DIVYA NANDLAL SAHETYA

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EDUCATION

University of Southern California — Los Angeles, USA
Master of Science (MS), Electrical and Computer Engineering (Machine Learning and Data Science) — **August 2021-May 2023**
Linear Algebra, Probability, Machine Learning, Deep Learning, Algorithms, Cloud Computing — **3.59 GPA**

Sri Jayachamarajendra College of Engineering — Mysore, India
Bachelor of Engineering (B.E), Electronics and Communication Engineering — **August 2015-May 2019**
Image Processing, Digital Signal Processing, Data Structures — **3.54 GPA**

TECHNICAL SKILLS

- **Programming Languages & Tools***:* Python, R, Java, C++, C, MATLAB
- **AI Framework and tools:** scipy, numpy, scikit-learn, Matplotlib, Pandas, PyTorch, Keras, Tensorflow, PySpark, Flask, REST API, Django, GraphQL, Shell Scripting,SQL (MySQL, PostgreSQL), NoSQL (MongoDB), Spark, Airflow, Hadoop, Tableau, Power BI
- **DevOps:** Kubernetes, Docker, Amazon Web Services (S3, EC2, SageMaker), GCP, Azure, Git, JIRA, Confluence
- **Domain Knowledge:** Machine Learning (Regression & Classification), Computer Vision (CNN, GANs, RNN, LSTM, Transformers, Object Detection - SSD, RCNN, YOLO), Natural Language Processing (LLM, Langchain), MLOps

WORK EXPERIENCE

Aledade Inc., San Jose, USA | Software Engineer II — **July 2023-Present**
- Working on data ingestion from 3rd party application into Aledade App using **Python, Snowflake, Airflow.**

Semio AI, University of Southern California, Los Angeles, USA | Research Volunteer — **June 2023**
- ***MLflow Pipeline with Cloud Run Integration***: Developed an end-to-end **MLflow** pipeline integrated with Cloud Run, Docker and **GCP**

University of Southern California, Los Angeles, USA | **Research Assistant** — **Jan 2023-May 2023**
- ***Semantic Segmentation using Meta Learning for Medical Images***: Designed a Meta-Learning framework for few-shot multi-organ tumor segmentation using dynamically weighted task subsampling and meta-update rules. Improved accuracy by **4%** over state-of-the-art **Reptile** framework of OpenAI in **PyTorch**

Biomedical Imaging Group, University of Southern California, Los Angeles, US | Research Assistant — **May 2022-August 2022**
- ***Bias field correction in 3D MRIs using convolutional autoencoders***: Implemented **convolutional auto-encoders** to de-noise human and mouse brain **MRI** images in **Keras**

Siemens Healthineers, Bangalore, India | **Software Developer** — **January 2019-July 2021**
- ***Log Sanitizer***: Constructed an end-to-end Python executable tool to encrypt Patient Health Information to comply with the **HIPAA** and deployed using **Docker** and **Kubernetes**. Implemented **CI/CD** practices using **GitLab** and **Azure DevOps**
  - **Parallel Processing** - Accelerated the encryption process for approximately ~ **1 million** live log files from diverse B2B and B2C business units by implementing **multithreading** and **multiprocessing**, resulting in a notable reduction of processing time.
  - **Python-Evt and Evtx Library Improvements**: Achieved a twofold acceleration in the log file-to-XML conversion process by optimizing the libraries, leveraging multiprocessing techniques.
  - **File Transfer Module** - Collaborated with other teams and developed a messaging module in **Java** to interact between two applications namely, the sanitization tool and file transfer tool using **JMS Messaging Module**
  - **Storage Optimization** - Leveraged **Amazon S3 buckets** for efficient and scalable storage of tool logs and stats during processing.
  - **Statistics Plugin** – Implemented a real-time **statistics** plugin to generate performance metrics for the tool

Sri Jayachamarajendra College of Engineering, Mysore, India | Research Assistant — **August 2018-May 2019**
- **System and method for dynamic translation of speech to Sign Language for Oral Health Education** (*IN Patent 201841039995*, ***IJRASET****)* - Engineered an Automatic Speech Recognition to Sign Language system using CNN with LPC features
- **System and method for Cleft Speech Training at home** (*IN Patent no. 202041045850)* - Devised an Automatic Speech Recognition system trained with MFCC features of speech samples for assisting partially speech disordered individuals to improve speech with interactive learning experience

ACADEMIC PROJECTS

Analysis of Supervised and Semi-Supervised Machine Learning for Cervical Cancer Diagnosis | *Github*
- Designed a cervical cancer diagnosis detection system using **semi-supervised learning** techniques like **self-training** and attained an accuracy of **90.55%** with **Adaboost classifier**

Medical Chat Bot | *Github*
- Developed a user-friendly medical assistance tool by leveraging extensive research from WebMD and DuckDuckGo search agents, utilizing Langchain to create a prompt that empowers users to access reliable medical information and make informed decisions