TM Vishnu Mukundan

Portfolio
Linkedin: linkedin/vishnu-mukundan-tm

Email: tm.vishnu.ms@gmail.com
Mobile: (919) 638 9588

EDUCATION

- **Duke University** — Durham, North Carolina, USA
  Artificial Intelligence for Product Innovation; — August 2024 - Present
- **Vellore Institute of Technology** — Vellore, India
  MTech Integrated in CSE with specialization in Data Science ; GPA: 8.32 — July 2019 - July 2024
  Courses: *Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Data Science, Databases*

SKILLS SUMMARY

- **Languages:**   Python, C++, JavaScript.
- **Frameworks:**   Numpy, Pandas, Pyspark, Scikit, NLTK, TensorFlow, Keras, PyTorch, OpenCV.
- **Platforms:**   Kali-Linux, Windows, AWS, GCP, MS Azure.

EXPERIENCE

- **Deakin University, Melbourne, Australia** — Hybrid
  SEBE Research Intern (Internship) — Nov 2023 – June 2023
  - **Mixed Reality**: Developed a pipeline capable of on-edge video text detection using the Google Vision API, and wrote the C# code for the wrapper capable of running on a Microsoft Hololens headset. Collaborated with Dr. William Raffe to deploy it as a scalable implementation.
- **Sentics GmbH, Wolfsburg, Germany** — Remote
  Computer Vision Intern (Internship) — Aug 2022 – Nov 2022
  - **Computer Vision**: Developed an algorithm that accurately estimated the base point of an object using pose keypoint data from TRTPose and their 2D-3D correspondence, resulting in a 100% improvement in the accuracy of object location estimation.
- **Miniscule Technologies Pvt Ltd., Chennai, India** — On-Site
  ML Cloud Deployment Engineer (Internship) — May 2022 - July 2022
  - **Machine Learning and Cloud computing**: Performed extensive research on evaluating major Cloud Service Providers and their readiness for industrial 5G use cases as a Cloud AIOps Engineer. Also deployed an on-edge custom face detection model using Amazon Rekognition, trained on employee data stored on Amazon S3 with an accuracy of 88% on the Hikvision AcuSense camera module.

PROJECTS

- **Blind.AI- A blind person assistance App**: Designed this voice and gesture-based app tasked with aiding individuals with acquired blindness. Added features such as Object Detection using YOLOv5, Currency Detection using OpenCV, OCR using Pytesseract, and SOS signal using Twilio API.
- **LLMTalk** : Designed a Streamlit-based application that helps users chat with your audio file, powered by Langchain, ChromaDB, and OpenAI.
- **AutoVizML**: Developed a Streamlit-based AutoML application facilitating data reading, preprocessing, EDA, model comparison, and visualization with a single click.
- **UFC Fight Prediction Matrix**: Scraping data from UFCFight Stats and cleaning the data to predict the outcome of a UFC fight using three ensemble models. Models used are NeRF, ensemble DecisionTree-NN, and CATBoost-NN. Accuracy reported for the models are 74.17%, 70.83%, and 71.67% respectively.

PUBLICATIONS

- **Handwritten Tamil Character Recognition using a Categorical Boosting Machine (August 2022)**: Presented at the 7th International Conference on Computing, Communication, Control and Automation (ICCUBEA-2023), Pune, India. Doi=10.1109/ICCUBEA58933.2023.10392044
- **A Media-pipe Integrated Deep Learning Model for ISL (Alphabet) Recognition and Converting Text to Speech with Video Input (October 2023)**: - Presented at the 3rd International Conference on Applied Intelligence and Informatics (AII2023), Dubai, UAE, and voted the best paper under the pattern recognition category. EISSN:2731-9261

CERTIFICATIONS

- Deep Learning Specialization (April 2, 2022): Issued by DeepLearning.AI
- AWS Certified Cloud Practitioner (July 16, 2022 - July 16, 2025): Issued by Amazon Web Services Training

EXTRACURRICULARS AND LEADERSHIP

- **1. Ikshana NGO - Non Profit** — Vellore, India
  Co-Founder and Vice-Chairperson — July 2022 - September 2023
- **Core committee member, Toastmasters International** — Vellore, India
  Level - 3 certified Toastmaster Roles served: Treasurer, mentor, and contest chair — January 2019 - June 2023
- **SSI certified open water diver** — Chennai, India
  ID: 4228338, Certified by Scuba Schools International — June 2024