

## VISHNU MUKUNDAN TM

Flat No.14, V.J Flats, Old No.24, New No.61, Gandhi Nagar, Adyar, Chennai, 600020, Tamil Nadu, India

Email: [tm.vishnu.m@gmail.com](mailto:tm.vishnu.m@gmail.com);

Phone: +91 9962752706;

GitHub: [Vishnu](#)

### OBJECTIVE:

To pursue a Master's in Computer Science Engineering with a specialization in Artificial Intelligence and Innovation to attain knowledge about Generative Artificial Intelligence, Graph Neural Networks, and AI Product Life Cycle, and later, utilize my expertise as an AI Solution Engineer in the industry solutions domain.

### ACADEMIC QUALIFICATION:

**M.Tech. Integrated in Computer Science Engineering with a specialization in Data Science**

Vellore Institute of Technology, Vellore

CGPA: 8.19/10

July 2019 - August

2024

### ACADEMIC PROJECTS:

- Blind.AI**, VIT, Vellore **Oct 2022- Oct 2023**  
**Team Size:** 2 **Role:** Team Lead
  - Created an assistive application for individuals with visual impairments.
  - Designed this voice and gesture-based app that is 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.
  - Enclosed are the features in an intuitive UX and delivered audio output using the GTTS library.
- LLMTalk**, VIT, Vellore **May 2022 - July 2023**
  - Designed a Streamlit-based application that helps users chat with your audio file, powered by Langchain, ChromaDB, and OpenAI.
  - The app is used to chat with any YouTube video by inserting the URL into a pipeline that extracts the video transcript and feeds it into GPT-4. Interactions can be made with this situational data through a Chatbot.
- Wishing Wand - AI-based Image Editing and Multilingual Social Media Caption and Hashtag Generator**, VIT, Vellore **April 2023 - September 2023**  
**Team Size:** 4 **Role:** Team Lead
  - Crafted a text-to-image-based application capable of removing, restoring, and background-filling content as well as generating captions and hashtags.
  - Developed a model that uses a Segment anything model that sends mask to either the Llama, Kandinsky 2, or Stable diffusion depending on the feature selected.
  - Used the Blip 2.7B model to generate captions and hosted all models on AWS.
- Handwritten Tamil Character Recognition using a Light-gradient Boosting Machine**  
VIT, Vellore **Jan 2022 - June 2023**  
**Team Size:** 2 **Role:** Team Lead
  - Hardcoded a novel Contour Handwritten Feature Recognition-based (CHFR) feature extraction to extract features from Tamil language alphabets, and fit them into a LightGBM model to classify them.
  - Implemented the feature extraction using Python and OpenCV, which utilized lengths, angles, and chord-to-arc ratios drawn on the contours of each image. The model produces an accuracy of 86.12%.

### PUBLICATIONS :

**Handwritten Tamil Character Recognition using a Categorical Boosting Machine**

**Aug 2023**

- Presented at the 7th International Conference on Computing, Communication, Control and Automation (ICCUBEA-2023), Pune, India.

**A Media-pipe Integrated Deep Learning Model for ISL (Alphabet) Recognition and Converting Text to Speech with Video Input,** **Oct 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.

### TECHNICAL SKILLS:

Python (programming language), R and RStudio (Integrated development environment for R), Pytorch (Deep learning framework), OpenCV (Computer vision library), Flask (Web framework), Keras (Deep learning framework), TensorFlow (Deep learning framework), Scikit-Learn (Machine learning library), AWS Cloud and Azure Cloud (Cloud computing platforms)

## INTERNSHIPS:

1. **SEBE Research Intern**, Deakin University, Melbourne **Nov 2023 – Present**
  - Developing an AR-CV pipeline capable of on-edge video text detection, capable of running on a VR headset.
  - Collaborating with Dr. William Raffe (Hybrid) to achieve the same.
2. **Computer Vision Intern**, Sentics GmbH, Wolfsburg **Aug 2022 – Nov 2022**
  - 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, with a 100% improvement in the accuracy of object location estimation.
  - Conducted extensive research and experimentation with various object and keypoint tracking methods and presented detailed findings and recommendations to the team, providing valuable insights, and contributing to the project's success.
3. **AIOps Intern**, Miniscule Technologies, Chennai. **May 2022 – July 2022**
  - Performed extensive research on evaluating major Cloud Service Providers and their readiness for industrial 5G use cases as a Cloud AIOps Engineer.
  - Deployed an on-edge custom face detection model using Amazon Rekognition, trained on employee data stored on Amazon S3 with an accuracy of 88%.
  - Used AWS Cloud, and Hikvision AcuSense camera as platform and hardware.

## CERTIFICATIONS/WORKSHOPS/ADDITIONAL COURSES:

**AWS Certified Cloud Practitioner**, Amazon Web Services Training, July 2022.

**TensorFlow Developer Professional Certificate**, DeepLearning.AI, July 2022.

**Deep Learning Specialization**, DeepLearning.AI, April 2022.

**Developing AI Applications on Azure**, LearnQuest, March 2022.

## CO-CURRICULAR:

- Student Member, Institute of Electrical and Electronics Engineers (IEEE), Oct 2022 – Oct 2023.
- Open Water Certified Scuba Diver Level 2, Professional Association of Diving Instructors (PADI), September 2023.
- Core Committee member, VIT Film Society, Dec 2020 – June 2023.
- Level 3 certified Toastmaster, Trueno VIT, Area A5, District 120, India, June 2020 – June 2023.
- Received a Yoga Teaching certification, Patanjali Yoga, July 2020.

## LEADERSHIP ROLES:

- Organizer for Technical Fest in College (Gravitas), VIT, Vellore, Sept 2022.
- Treasurer for Toastmasters International Club, Trueno VIT, Vellore, July 2021.
- Division PR Chair for Toastmasters District 120 contest, VIT, Vellore, March 2021.
- Organizer for School Culturals (Kalanjali), Bala Vidya Mandir School, Chennai, July 2018.

## COMMUNITY INVOLVEMENT:

1. **IKSHANA** (NGO), Vellore **July 2022 – Present**  
**Role:** Co-Founder and Vice-Chairperson
  - Conducted kindergarten visits, teaching children how to read and write using illustrations and interactive games like musical chairs to make education engaging.
  - Visited nursing homes and interacted with the senior citizens who showered us with words of wisdom, and we also helped raise and donate essentials to the home.
  - Participated in beach cleaning, and cleaned the blue flag Kovalam Beach in Chennai, in association with Bayoflife, clearing 35 kgs of waste.
2. **Chennai Students' Sea Turtle Conservation Network**, Chennai **Jan 2019 – Present**  
**Role:** Core Committee Member
  - Aided in patrolling the beaches every night, between January and April every year, along with Forest Department staff to collect Olive Ridley Turtle eggs and transfer them into hatcheries.
  - Released the turtles securely as soon as they hatched in the morning.
3. **Swami Vivekanand Education Trust**, Chennai **Jan 2021 - Jan 2022**  
**Role:** Core Committee Member
  - Helped individuals with vision impairment by serving as a volunteer scribe.
  - Taught children fundamental concepts of Science, Maths, and English and organized donation drives.