# Harshitha Upadhyayula

**VNR VJIET** 

Hyderabad, Telangana, India

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## **Education**

Program	Institution/Board	CGPA/%	Year
B. Tech. (Computer Science) Intermediate (MPC) Secondary School	VNR VJIET	9.3/10	2022 - Present
	Narayana Jr College	9.8/10	2020 - 2022
	CMR International School	9.6/10	2020

## **Key Projects**

Designed a chess engine to enhance Al-based gameplay by integrating Monte Carlo Tree Search (MCTS) and ne Beta 0

- o Implemented using Transformers, TensorFlow, and Stable Baselines3 in Python for efficient Al-driven decision-making.
- o Keywords: MCTS, Neural Networks, Transformers, TensorFlow, Reinforcement Learning, Python

Developed a web-based tool to automate document extraction and conversion, reducing manual effort in data re Doc Scrapper

- o Built using Python, Selenium, React, MongoDB, and Google Generative AI API for intelligent document parsing.
- o Keywords: Web Scraping, OCR, Generative AI, React, MongoDB, Selenium, Python

Created a dynamic maze-solving platform to generate, store, and track user progress across multiple sessions.

Maze Runner - Full-Stack Phoenix Application

Personal Progress across multiple sessions.

- o Implemented using Phoenix LiveView, Elixir, and WebSockets for real-time updates and an interactive user experience.
- Keywords: Phoenix LiveView, Elixir, WebSockets, Full-Stack Development, Real-Time Systems

Iris-Based Multi-Disease Prediction

Engineered a few-shot learning model for iris-based disease classification, addressing the challenge of limited med

- o Used MBSIF Siamese Networks, meta-learning, and contrastive loss to enhance prediction accuracy on small datasets.
- Keywords: Few-Shot Learning, Siamese Networks, Meta-Learning, Contrastive Loss, Medical AI

### Research Work

Explores the integration of the Internet of Medical Things (IoMT) with artificial intelligence (AI) to revolutionize Internet of Medical Things and AI in Healthcare

o Keywords: IoMT, AI in Healthcare, Medical Devices, Data-Driven Decision Making

Analyzes the cognitive science perspective of thought as an internal language-like representation. Discusses its in Language of Thought Hypothesis

Keywords: Cognitive Science, Symbolic AI, Neuro-Symbolic Reasoning, Thought Representation

Designing an intuitive interface using computer vision (eye-tracking) and speech recognition to reduce reliance of A Novel Framework for Digital Accessibility

Keywords: Digital Accessibility, Computer Vision, Eye-Tracking, Speech Recognition, Adaptive Learning

#### **Technical Skills**

- o Programming: Python, Java, Scala, C++, R, JavaScript, Go, Elixir
- o Web Development: React.js, Flask, Phoenix, Ruby on Rails, Tailwind CSS, Appwrite, MongoDB, MySQL
- o AI/ML Libraries: TensorFlow, Keras, PyTorch, Scikit-learn, TensorFlow.js, NumPy, Pandas
- o Cloud DevOps: AWS, Azure, GCP, Docker
- o Tools: Git, VS Code, Figma, LaTeX

# Positions of Responsibility

- **Vice President**, StreetCause VNRVJIET Led fundraising initiatives and oversaw project execution to support the development of multiple schools and orphanages.
- **Documentation Head**, Computer Society of India (CSI) Action Committee Managed documentation and actively participated in organizing technical events and skill-enhancing workshops.
- **Hospitality Head**, TEDxVNRVJIET Assisted in organizing motivational events to provide a seamless experience for speakers and attendees.
- o Volunteer, Turing Hut Contributed to technical initiatives and student engagement activities.
- o Organizing Committee, Hult Prize Played a key role in event organization and logistics.
- o Main Organizer, Designathon Led the planning and execution of a large-scale design competition.

## **Workshops**

- o Participated in the webinar, Foundations of Vedic Mathematics conducted by SSNU, Tamil Nadu (20xx).
- o Participated in the webinar on NBA Accreditation & Role of Stakeholders in the light of National Education Policy (2020), organized by Women's polytechnic, Tripura in association with NITTTR, Kolkata (20xx).
- o Participated the *International Youth Web-Conclave on Vasudhaiva Kutumbakam*, jointly organized by Sixth Sense Foundation, Shree Sisters, Kongunadu Arts and Science College, Sri Sarada Niketan College of Science for Women and Global International School (Nov 20xx).
- Attended the workshop on Program for Aspiring College Teachers (PACT), conducted by TLC, IIT Madras (20xx).

# **Achievements/Awards**

- o Successfully qualified UGC-NET (20xx), SLET-NE Region (20xx), WB-SET (20xx) and GATE (20xx).
- o Secured 3<sup>rd</sup> rank out of 540 in *Virtual Product Management Experience Project* conducted by Quollab (20xx).
- o Competed in the Code To Japan Algorithms and Code To Japan Al challenge, with overall 188/746 (20xx).
- o Awarded as Star Teaching Assistant for contribution as a Teaching Assistant, by CSE Department, IIT Madras (20xx).
- o Received the Certificate of Appreciation for donating blood, State Blood Transfusion Council, West Bengal (20xx).
- o Secured 2<sup>nd</sup> in quiz competition in Rotary Youth Festival held by Rotary Club of Tura, Meghalaya (20xx).
- o Secured 1st in quiz competition in Rotary Youth Festival held by Rotary Club of Tura, Meghalaya (20xx).
- Secured *Consolation Prize* in essay writing competition on topic *Conservation of Natural resources* held by Soil Conservation Department, Meghalaya (20xx).

#### **Others**

- Hobbies: Travelling, Cooking, Debating, Dancing, Strengths: Problem-Solving, Leadership, Teamwork,
   Anime, Photography and Editing
   Adaptability
- o Languages: Bengali, Hindi, Assamese, Nepali, Garo

## **Declaration**

I do hereby declare that all the details furnished above are true to the best of my knowledge and belief.

Harshitha Upadhyayula