



# Ram Sundar Radhakrishnan

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Date of birth: 29/10/2004 Nationality: Indian

## ABOUT ME

Third-year B.Tech CSE student specializing in Large Language Models (LLMs) and Vision-Language Models (VLMs) with experience in NLP pipelines, real-time computer vision, and LLM fine-tuning. Interested in applying AI to knowledge systems, education, and supply chain optimization.

## WORK EXPERIENCE

### **Vellore Institute of Technology, Chennai Campus**

**City:** Chennai | **Country:** India

[ 15/05/2025 – 07/07/2025 ]

### **Research Intern**

Worked on large-scale NLP and vision-language projects under the VIT Summer Research Internship Program, focusing on efficient information extraction and real-time visual analysis.

- Designed and implemented a two-stage NLP pipeline using Gemma 3 4B for entity/relation extraction, generating 673K+ triplets from 68K sentences using local GPUs, HPC clusters, and cloud instances.
- Developed a real-time video proctoring system using OpenCV2, SmolVLM 500M, Gemma 3 1B, classifying attentiveness with <1 minute latency per 30-second clip.
- Fine-tuned GPT-2 and Gemma 3 1B using DPO for domain-specific tasks; experimented with LoRA and PEFT on LLaMA 3.1 8B.

## EDUCATION AND TRAINING

[ 07/08/2023 – Current ]

### **Bachelors of Technology in Computer Science and Engineering**

**Vellore Institute of Technology, Chennai Campus** <https://chennai.vit.ac.in/>

**City:** Chennai | **Country:** India | **Field(s) of study:** Information and Communication Technologies | **Level in EQF:** EQF level 6

## LANGUAGE SKILLS

**Mother tongue(s):** English

**Other language(s):**

**Hindi**

**LISTENING B1 READING B1 WRITING B1**

**SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1**

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## SKILLS

Machine Learning | Python | C++ | AI | LLMs | Deep Learning | Solidity | Linux

## PROJECTS

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[ 15/05/2025 – 07/07/2025 ]

### Triplet Extraction for Knowledge Graphs

Used **Gemma 3 4B** in a 2 stage pipeline to extract subject-relation-object triplets from a dataset of sentences scraped from technical literature.

Extracted **673,421 triplets** from **68,491 sentences**.

Utilized local hardware, cloud computing and university's high performance computing to achieve the goal.

[ 15/05/2025 – 07/07/2025 ]

### Video Proctoring using Vision Language Models

Designed an efficient Video Proctoring system using **SmolVLM 500M** and **Gemma 3 1B** to categorize input video as "Distracted" or "Focused", along with justifications for the classification.

The system can process a 30 second clip in about 1 minute.

### Solidity Smart Contract Design for Improving Efficiency of the Indian Public Distribution System

[ 01/08/2025 – Current ]

Designed a permissioned blockchain based Smart Contract system to improve transparency and traceability in India's Public Distribution System.

Built a full Solidity prototype modelling the grain lifecycle (creation → procurement → inbound → audit → release → shipment → retail). Evaluated gas usage, latency, storage invariants, and workflow safety using Foundry on a Paris-compatible EVM.

*(Manuscript currently under internal review.)*

## NETWORKS AND MEMBERSHIPS

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[ 01/03/2024 – Current ]

### Toastmasters International Chennai, India

- **President**, Aletheo VIT Toastmasters Club (Jan-Dec 2025)
- **Club Mentor**, Exordio VIT Toastmasters Club (Jan-Jul 2025)
- **Triple Crown Awardee** (3+ educational achievements in a single year)
- Winner of **Division Support Champion Award**
- Completed **Dynamic Leadership Pathway**