

# Redla Varsha Reddy

☎ (412) 430-1579

✉ vredla@andrew.cmu.edu

🌐 linkedin.com/in/varsha-redla

## EDUCATION

### Carnegie Mellon University (CMU)

*Master of Science in LTI (Intelligent Information Systems)*

Pittsburgh, PA

December'24

**Relevant Coursework:** Machine Learning, Multimodal Learning, Multilingual Learning

### International Institute of Information Technology (IIIT-H)

*Bachelor of Technology in ECE (Hons. NLP) — CGPA: 8.65/10*

Hyderabad, India

July'21

**Relevant Coursework:** Computer Programming, Data Structures and Algorithms, Operating Systems, Machine Learning, Natural Language Applications, Speech Technology, Digital Signal Processing, Computer Networks, Linear Algebra, Differential Equations, Computer Organization, Probability and Random Processes

## EXPERIENCE

### Adobe Inc.

*Software Development Engineer - 2, SDE Intern*

Bangalore, India

July'21 - Aug'23, May'20-Jul'20 (Intern)

- Worked on a project to auto-purge archived/deleted customer assets after a fixed period. Reduces the creative cloud storage cost by 30% for the company.
- Improved the scalability of our system by 10x by working on making our system resilient to failures.
- Worked on retroactively encrypting user data using Azure Key Management in a multi-part strategy.
- Improved functional and unit test coverage for better code quality and maintenance by 21%.
- Led and delivered a complete revamp of codebase from OSGi into Spring based micro-service model.

### National University of Singapore

*Research Internship . Dr. Hongliang Ren*

Singapore, Remote

July'22 - Dec'22

- [NDA] Developed a model to enhance keyword focus in medical visual question answering while maintaining answer fluency.

### International Institute of Information Technology (IIIT-H)

*Undergraduate Researcher · Teaching Assistant*

Hyderabad, India

May'19 - July'21

- **Full time Honors student** at IREL (Information Retrieval and Extraction) lab under *Prof. Vasudev Varma*. Worked on Style Transfer, Hate speech detection and Body shaming classification. Published two research papers during this period - Fine grained hate speech detection and Body shaming detection.
- **Independent Study** at NLP lab under *Prof. Manish Shrivastava*. Worked on the problem of Improving Abstractive Summarization with content selection.
- **Teaching Assistant** under Prof. Vineet Gandhi for Statistical Methods in AI (Spring 2020 - ML Elective).

## SKILLS & AWARDS

**Programming Languages:** *Advanced:* Python, MySQL *Intermediate:* C++, Java, MATLAB, C *Beginner:* Javascript, Verilog, Cadence, BlueSpec.

**Tools & Frameworks:** *Advanced:* Spring, Keras, PyTorch *Intermediate:* AWS, PySpark, HTML, CSS, Grafana, PowerBI, Gatling, Splunk, Jenkins, MongoDB.

**Achievements:** Awarded Dean's List Award for Academic Excellence, Secured first place in Walmart Hackathon @ IIIT-H amongst 64 teams, Part of nation's top 250 in Physics and Chemistry Olympiad

## RELEVANT PROJECTS

- **Information Retrieval - Wiki Search Engine:** Developed a scalable search engine on a static Wikipedia dump of 64GB using distributed indexing, searching and ranking.
- **Operating Systems - C Shell:** Built a user-interactive mini linux shell having major features of GNU/Linux shell like redirection, piping and handling foreground and background processes using system calls.
- **NLP - Summarization:** Developed a top performing model for sentence pair classification and Scientific Domain Summarization, as part of CL- SciSumm shared task using Siamese Networks.
- **Database Systems - MiniSQL Engine:** Developed a mini SQL engine in python with features like joining, duplicate elimination, selection and projection. Implemented B+ trees for indexing.
- **Computer Networks - Proxy Server:** Implemented a multi-threaded proxy server which serves multiple requests from users using TCP/UDP protocols for file transfer with LRU (least recently used) caching for faster file transfer.
- **ML - Face Recognition:** Achieved an accuracy of over 90% accuracy on multi-label classification of facial images using dimensionality reduction and Logistic Regression, Naive bayes built from scratch.
- **Speech Recognition:** Built an ML model to detect Pathological Speech Signals using Mel Frequency Cepstral Coefficients on LP Residual. Additionally, explored the performance with Jitta and Shim features.

## PUBLICATIONS

**'You Are Big, S/he Is Small' Detecting Body Shaming in Online User Content:** International Conference on Social Informatics'23

**Hate Speech Detection using Classical Machine learning and Transfer learning based approaches:** HASOC, sub track at Forum For Information Retrieval 2020 (FIRE'20)