VYSHNAVI GUTTA

Incoming MSCS student, GeorgiaTech, Fall 2021
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Education

2014-2020	B.Tech and M.S by Research in computer science and engineering, **International institute of Information and technology, Hyderabad**	*GPA*:8.04/10
2012-2014	Board of Intermediate education, **Sri Chaitanya, Vijayawada**	*GPA*:9.78/10
2012	Schooling, **V.P.S Public school, Vijayawada**	*GPA*:10/10

Publications

1. **An improved human-in-the-loop model for fine-grained object recognition with batch based question answering.** Paper accepted at CoDS-COMAD 2020
2. **Towards building a field diagnosis guide for farmers.** Paper accepted at AFITA/WCCA2018
3. **Fine-grained object recognition via Image and Batch-based local Question-answering** Journal paper under review at IEEE Transactions on Knowledge and Data Engineering

Research Experience

Mar 2021-July 2021 — Domain-agnostic query intent detection

Data scientist at Jio, Hyderabad

- To effectively detect the intents from queries in sub-domains of Human resource management in an effort to automate subsequent processing & action.
- Investigated co-interactive transformer model **DCA-net** with a shared encoder architecture and a co-interactive module for query intent detection.
- Leveraged **mixture of experts** and **domain adversarial training** with gradient reversal for multi-source domain adaptation using LPX models.

June 2020-Feb 2021 — NLU for medical sense disambiguation in user dialogue

Data scientist at Jio, Hyderabad

- Unseen symptom, attribute, value extraction & mapping to structured data given an utterance.
- Investigated slot filling techniques by incorporating pre-trained medical models retrofitted on Bio-NLP embeddings. Tested with **Clinical, Distil, Blue BERT** transformer models.
- Implemented **Induction network** for few shot symptom recognition via text classification and **Capsule neural net** as further re-enforcement for joint intent detection and slot filling.

Jan 2020-June 2020 — transliteration using local attention based sequence to sequence model

Data scientist at Jio, Hyderabad

- Research with a focus on **Luong's Sequence to Sequence model with monotonic local attention** in tensorflow for transliteration from Latin to Indian scripts.
- Using the former as the base-model by training on syllabified parallel transliteration pairs made using **Sonority Sequencing Principle (SSP)**. Extended SSP to Devanagari script.
- Proposed models outperformed Google's transliteration by 7% and 3% in levenshtein's Edit-distance and Elastic Search's fuzzy search metrics respectively.

Aug 2018-Aug 2020 — Recognition via Image and Batch-based Local Question answering

Thesis project at International institute of Information and technology, Hyderabad.
Supervisor: Dr. P. KRISHNA REDDY

- Successfully demonstrated cost-sensitivity in the existing fine-grained recognition approaches and proposed *Recognition via Image and batch-based local question answering* to this end.
- Proposed a novel **dynamic cluster-centric local question mining** method based on the concept of **locality degree of an attribute in a cluster.**

May-Aug 2017 — crop darpan: engineering crop diagnosis framework

Research assistant at International institute of Information and technology, Hyderabad
Supervisor: Dr. P. Krishna Reddy

- Led and designed **Hierarchy-based knowledge acquisition** and **Coverage-set based question mining** models on visual symptoms of an affected crop for disease prediction with question answering.

Skills

Programming	C/C++, Python, Java, Ruby, Bash, PHP
Web Development	HTML, CSS, JS, MySQL, SQLite
Frameworks	Tensorflow, Pytorch, Cuda, Rapid Miner, Elastic Search, Docker, Protobufs, Kubernetes, Android, CodeIgniter, Web2Py
Graphics/Vision	OpenGL,WebGL, Unity

Awards and Roles

- Academic proficiency: Secured **94, 99.88** and **99.94** percentile in JEE Advanced, JEE Mains and AP-EAMCET among 15,00,000 students
- Deans list for merit: Received for academic excellence
- Kaggle challenges: Ranked 27 and 45 worldwide in the challenges *House prices advanced regression techniques, semantic segmentation*
- Jio CoDiva Hackathon Top 20: C++ Hackathon
- Invited Talks: Presented a talk on **Efficient Knowledge Transfer** at IIT Hyderabad
- Reviewer: Paper reviewer for *TENCON* and *APWEB*, 2019
- KALAKSHETRA: Art manager and content designer for Kalakshetra
- Big Data Analytics Conference: Attendee and volunteer
- Teaching assistant: Science, Mathematics and Data mining
- Literary Club: President
- IIIT Hyd LeanIn Women's Tech: Coordinator
- SPORTS: Won Gold in women's Hockey, Cricket at IIIT Hyderabad and at district-level swimming championships