Revanth Gangi Reddy

Graduate Research Assistant, UIUC *(Siebel Scholar, Class of 2022)*

✉ g.revanthreddy111@gmail.com   ●   ⌨ gangiswag.github.io

Interests: Natural Language Processing, Deep Learning and Machine Learning

Education

B. Tech, Computer Science	Indian Institute of Technology, Madras	CGPA - 9.16/10.0	July'14 - May'18
MS in Computer Science	University of Illinois, Urbana Champaign	GPA - 3.83/4.0	Jan'21 - Dec'22

Work Experience

University of Illinois at Urbana-Champaign   **Oct 2020 - Present**
Graduate Research Assistant, Blender Lab   *Champaign, United States*
○ Working on projects in the areas of multimodal QA, information retrieval and claim detection in news articles.

IBM Research AI   **Oct 2019 - Oct 2020**
AI Resident, Multi-lingual NLP team   *New York, United States*
○ Worked on projects in the areas of question answering, open-domain knowledge retrieval and AMR parsing.

Microsoft   **Oct 2018 - Sep 2019**
Software Engineer, Data Integration team   *Vancouver, Canada*
○ Part of the team responsible for developing data connectors that are used in PowerApps, LogicApps and Flow.

Current Research Projects

MuMuQA: Multi-Media Multi-Hop News Question Answering via Cross-Media Grounding
Under review at AAAI 2022
○ Proposed a benchmark that incorporates **cross-media knowledge extraction and grounding** for multimedia question answering over news articles.
○ Introduced a novel data generation framework that uses **multi-media information extraction** for generating synthetic training data for the multimedia QA task.

Recent Publications (* denotes first author)

Synthetic Target Domain Supervision for Open Retrieval QA* PDF   *SIGIR 2021 (poster)*
○ Leveraged an **automatic text-to-text generation** idea to improve the performance of state-of-the-art open-domain **end-to-end** question answering systems in a specialized domain, such as COVID-19.

InfoSurgeon: Information Consistency Checking for Fake News Detection PDF   *ACL 2021*
○ Proposed a cross-media **fake news detection** system that identifies misinformation at the **knowledge element level**, with improvements in detection accuracy and better model interpretability.

Multi-Stage Pre-training for Low-Resource Domain Adaptation* PDF   *EMNLP 2020*
○ Proposed **synthetic pre-training** objectives by using structure in unlabeled text, that can transfer to downstream tasks with considerable gains in the **IT Domain.**

Answer Span Correction in Machine Reading Comprehension* PDF   *Findings of EMNLP 2020*
○ Proposed an approach for **correcting partial match answers** (EM=0, 0<F1<1) into exact match (EM=1, F1=1) and obtained upto **1.3%** improvement in both monolingual and multilingual evaluation.

Pushing the Limits of AMR Parsing with Self-Learning* PDF   *Findings of EMNLP 2020*
○ Proposed **self-learning approaches** via generation of synthetic text and synthetic AMR as well as refinement of actions from the oracle, achieving **state-of-the-art** performance on benchmark AMR 1.0 and AMR 2.0 datasets.

Multi-Level Memory for Task Oriented Dialogs* PDF   *NAACL 2019 (poster)*
○ Designed a novel multi-level memory architecture that retains **natural hierarchy** of the knowledge base without breaking it down into **subject-relation-object** triples.

Internships

IBM Research AI   **Summer 2018**
Research Intern, Watson Conversations team   *New Delhi, India*
○ Worked on better neural memory architectures for improving the performance of **task-oriented dialog** systems.

Microsoft India Development Center   **Summer 2017**
Research Engineering Intern, Cortana Personalization Team   *Hyderabad, India*
○ Developed a model for **forecasting user activity** using **behaviour patterns** based on user temporal data.