AMOGH MANNEKOTE

Gainesville, FL, USA

+1 (352)-562-4114 ⋄ msamogh@gmail.com

EDUCATION

University of Florida   *January 2021 - Present*
PhD in Computer Science

Ramaiah Institute of Technology   *August 2014 - August 2018*
Bachelor of Engineering
Computer Science and Engineering

RESEARCH INTERESTS

Dialogue Systems, Learning from Few Samples, Co-Creative and Collaborative Dialogue, Natural Language Processing, Zero-Shot Learning, and Human-Centered Computing

EXPERIENCE

Fractal Analytics and Cuddle.AI, Bengaluru   January 2020 - November 2020
Data Scientist

· Built an end-to-end evaluation framework for a Text-to-SQL semantic parser that reduced the time-to-release from one working day to a few minutes
· Developed a Named Entity Recognition and similarity scoring pipeline for identifying highly domain-specific skills from unstructured job listings

Rasa, Berlin (rasa.com)   July 2019 - November 2019
Machine Learning Solutions Architect

· Developed machine learning solutions for enterprise customers to develop large-scale conversational AI projects in health, automotive, insurance, and retail domains.
· Made several software development contributions to the Rasa open source platform

Robert Bosch Center for Cyber Physical Systems, IISc, Bengaluru   July 2018 - June 2019
Project Assistant under Dr. Raghu Krishnapuram

· Evaluated various approaches to Visual SLAM (Simultaneous Localization and Mapping) with sensor fusion in an outdoor, resource-constrained setting
· Improved the accuracy of a extrinsic calibration system that was based on Perspective-n-Point (PnP) by introducing a Grid Search step over the pixel-space of the images

IBM, Bengaluru   April 2018 - June 2018
Intern - Watson Machine Learning Team

· Worked on integrating TensorFlow, Keras, and PyTorch frameworks into Watson's platform
· Helped a client migrate their existing, offline workflow to the Watson Machine Learning platform

Stride.AI, Bengaluru   February 2017 - May 2017 and August 2017 - Feb 2018
Research Intern

· Designed a conversational assistant to help a large Fortune 500 organization search for in-house talent for help on highly specific problems with a natural-language question-answering interface
· Evaluated various approaches such as topic extraction, semantic similarity, text similarity, Doc2Vec, and Siamese networks.

Game Theory Lab, Dept of Computer Science, IISc, Bengaluru   June 2017 - August 2017
Intern under Dr. Y Narahari

· Simulated prediction markets using sentiment analysis of news sources

Microsoft Student Developer Program   June 2015 - August 2015
Student Developer

· Developed a social mobile app that allowed university students to subscribe to updates from their favorite clubs and societies

KEY PROJECTS

Using Granular Annotations to Increase Out-of-Distribution Generalization Capacity of Gradient-Descent Based Machine Learning Models **(Undegraduate thesis)**
github.com/msamogh/RFFT

· With a small number of fine-grained human annotations, we showed that we can greatly increase the out-of-distribution generalization capacity of a neural network - for out-of-domain samples by penalizing high magnitudes of input gradients at regions of the input space that are known to be irrelevant (as part of the training cost function).
· End users and model developers could annotate a small number of examples using an intuitive web-based annotation tool for both images and text data.

nonechucks - A PyTorch library for dynamically handling data pipeline failures
github.com/msamogh/nonechucks

· nonechucks is an open source library for PyTorch that allows developers to transparently handle invalid or unwanted samples in their machine learning data pipelines. It also extends the existing construct of PyTorch's Data Transforms to function as Data Filters.
· Trended on GitHub's list of Python repositories for a week

Rasa-Frames: A Frame-Based Dialogue Framework
github.com/msamogh/rasa-frames

Rasa Frames is an open-source dialogue systems framework inspired by the Microsoft FRAMES dataset that allows multiple dialogue "frames" to be handled in parallel in a single dialogue.

TECHNICAL STRENGTHS

Computer Languages	Python, Java, Javascript, C/C++, SQL
Web/Mobile Platforms	HTML, CSS, ReactJS, AngularJS, Android
Machine Learning Frameworks	TensorFlow, PyTorch, Keras, Scikit-Learn
Tools	Git, Docker, Shell scripting