

# Harish Sista

(He/Him)

*No work authorization required*

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## SUMMARY

Ph.D. Candidate researching in ML and NLP with 7+ years of experience working with ML models, Big Data, and Cloud Computing platforms and 2+ years of experience working in a professional environment. Spearheaded an Evidence Extraction and Fact Verification model using Prompt Engineering and tested it with various LLMs. Invented a Black Box Optimization model for online hyperparameter fine-tuning, significantly enhancing model performance in real-time applications.

## SKILLS

Programming Languages	AI Tools	LLMs	Developer APIs	Cloud Platforms	Research Interests
<ul style="list-style-type: none"><li>• Python</li><li>• C++</li><li>• Java</li><li>• Objective C</li><li>• Swift</li><li>• SQL</li></ul>	<ul style="list-style-type: none"><li>• PyTorch</li><li>• OpenAI</li><li>• HuggingFace</li><li>• Transformers</li><li>• TensorFlow</li><li>• SciKitlearn</li><li>• NLTK</li><li>• NumPy</li></ul>	<ul style="list-style-type: none"><li>• GPT</li><li>• LLAMA</li><li>• MISTRAL</li><li>• BLOOM</li><li>• BERT-based models</li></ul>	<ul style="list-style-type: none"><li>• Twitter</li><li>• Facebook</li><li>• YouTube</li><li>• Google</li><li>• Amazon</li></ul>	<ul style="list-style-type: none"><li>• GIT</li><li>• PyPA</li><li>• AWS</li><li>• Google Cloud</li><li>• Apple Store</li><li>• Heroku</li></ul>	<ul style="list-style-type: none"><li>• NLP</li><li>• Prompt Engineering</li><li>• Explainable Attention Networks</li><li>• DL</li><li>• Generative Models</li></ul>

## EDUCATION

<b>Ph.D. in Machine Learning</b> (Computer Engineering department) Stevens Institute of Technology, Hoboken	01/2018 – Present
<b>M.Eng. in Software Engineering</b> (Electrical Engineering department) Stevens Institute of Technology, Hoboken	01/2014 – 12/2015
<b>B.Eng. in Electronics and Communication Engineering</b> M.V.S.R Engineering College, Hyderabad, TG, India	08/2009 – 05/2013

## RESEARCH EXPERIENCE

<b>Infinity Lab</b> , Stevens Institute of Technology – Hoboken, NJ	01/2018 – Present
<ul style="list-style-type: none"><li>• Work with various LLMs to address the challenges of Fact Verification using Prompt Engineering, Text Generation, Classification and Evidence Extraction Tasks.</li><li>• Invented a Black Box Optimization model for Online Hyperparameter finetuning.</li><li>• Built various Python Libraries using Multiprocessing and GPU programming to work efficiently with big datasets.</li><li>• Surveyed and implemented various Attention Networks, DNNs and Generative Models to perform NLP tasks of Data Extraction, Modeling, Regression, Ranking, and Classification.</li><li>• Collaborated in creating various Scientific, social media, and Misinformation Datasets.</li><li>• Developed an AI based iOS application to perform MoCA test for early detection of Alzheimer's.</li></ul>	

## WORK EXPERIENCE

<b>Research Assistant</b> , Stevens Institute of Technology – Hoboken, NJ	10/2018 – 09/2019
<ul style="list-style-type: none"><li>• Created a chemistry literature dataset for the purpose of similarity search with search queries.</li><li>• Preprocessed the dataset, using PDF conversion tools and NLTK library to remove the noise.</li><li>• Produced a Novel Generative Ranking Model using Topic Modeling and KeyPhrase analysis, to extract most relevant papers related to the search query.</li></ul>	
<b>AI Engineer/iOS Developer</b> , Fresh Digital Group – NY, NY	07/2016 – 06/2017
<ul style="list-style-type: none"><li>• Collaborated with Content Writers and Creative Team to individually design and deploy ~30 chat applications for Amazon-Alexa which won appreciation from tech newsletters.</li><li>• Developed various iOS, iMessage and tvOS applications in conjunction with several teams.</li><li>• Helped company obtain a preferred partnership with Amazon-Alexa and launching partnership with Microsoft-Cortana.</li></ul>	