Praneeth Gubbala

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EMPLOYMENT

Senior Machine Learning Scientist **Walmart Labs** **June 2020-Present**

- Developed an ML system to perform the voice-based product search refinement by identifying refinement intents and product attributes for filtering. Dual Intent and Entity transformer, Query Understanding.
  Conference Paper: West Coast NLP (WeCNLP) 2021 Oct 29,2021
  A Sequence-to-Sequence Model for Extracting Multiple Product Name Entities from Dialog
- Working as Conversational AI Platform ML Tech Lead includes the voice re-order and Comdev for associates.
- Developed a multi-task transformer-based neural network model architecture to recognize the multiple (1-10) products and their facets through entity extraction and linking for Walmart's voice re-order system. Transformers, Hugging Face, BERT, XLNET, Roberta.
  Speaker Talk: Walmart Data Science Practice 2020 GURU: ML Ops and Conversational AI as a Service

Applied Scientist III - NLP **Walmart Labs** **Jul 2018- May 2020**

- Implemented an Active learning system to automatically select the training examples from the pool of live user utterances to improve the text classification system performance by 5-7 % in Walmart Scale. Online Learning, Vowpal Wabbit.
- Deployed dynamic English and Spanish named entity extraction model training and Optimization to enable self-service entity extraction models training in Guru Platform for Walmart US, International, Sam's Club US. Autoencoder Language model Google BERT, Conversational Representations from Transformers, GPU, Sequence to Sequence, A/B Testing.
- Built Intent determination models to predict the utterance skill by above 98% F1 score in Production Ask Sam English, Spanish Conversational AI. Deep Neural Networks, Transformers, TensorFlow, Predictive Modeling.

  Patent: U.S. 62,840,991: "Systems for processing information requests of retail facility workers (Ask Sam)."

  Invited Speaker Talk: Rasa Developer Summit 2019 San Francisco, California
  Conversational AI in Walmart Natural Language Processing Sept 24, 2019

Senior Machine Learning Engineer **Samsung Research** **July 2014-Dec 2016**
Intelligent Services Spot Award – October 2016

- Improved Bixby NLU latency for some utterances by 60% by implementing a decision-making model to predict the context switch between In-Domains like Call, SMS, and out-Domains like wolfram alpha, web search.

  Bixby NLP Research Employee of the Month – January 2015
- Part of the top 7 hires of Bixby NLU, Built the multiple versions of Bixby English, Spanish intent classification models (in Galaxy S6, S7, S8 Bixby), named entity recognition models using supervised machine learning model algorithms Bi-LSTM, conditional random filed (CRF).
- Predicted the new intents to virtual assistant from the pool of unlabeled big data logs using the k-means clustering algorithm to improve Query Understanding performance by 6-8 %.
- Implemented contacts ranking system on name disambiguation list to enable the Bixby hand free auto-calling.

Graduate Research Assistant **NLP Lab, Stony Brook University** **Jan 2017-Dec 2017**

- **PrIA (Privacy-Focused Intelligent Assistant):** Developed an On-device ML privacy system that predicts user personality by entity-sentiment analysis from their private data under guidance of Niranjan Balasubramanian.

EDUCATION

Stony Brook University **Stony Brook, NY** **Jan 2017-May 2018**
Master of Science in Computer Science Winner of Bloomberg Code Con–SBU 2017

- Open Source Contributor: Rasa Machine Learning Framework

Osmania University **Hyderabad, India** **Oct 2010-May 2014**
Bachelor of Engineering in Computer Science National Merit Scholar (2010-14)

LANGUAGES AND TECHNOLOGIES

- Python; Java; C++; C; NoSQL; MySQL; Shell Scripting; Klein; Kernel Programming; Databricks; Keras; Open CV.
- PyTorch; TensorFlow; Language modeling; Spacy; Azure; Cosmos Db; scikit-learn; Sklearn; AWS; Docker; Rasa.