Praneeth Gubbala

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EMPLOYMENT

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

Speaker Talk: Walmart AI Summit 2022 Sequence to Sequence Model for Extracting Multiple Products

Patent: U.S. 17,730027: "Systems to identify multiple products from utterances (Voice reordering system)."

- Conversational Commerce: Developed an ML system to perform the voice-based product search refinement by identifying refinement intents and product attributes for filtering. Entity role, Refinement Understanding, Relation extraction.

Conference Paper: West Coast NLP (WeCNLP) 2021 Oct 29,2021
A Sequence-to-Sequence Model for Extracting Multiple Product Name Entities from Dialog

- NLP Platform: Working as Tech Lead to lead ML Ops, voice re-order and Comdev for associate's initiatives.
- Developed a multitask learning transformer-based neural network model architecture to recognize the multiple (1-10) products, their facets through entity extraction and linking for Walmart's voice re-order system.

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 %. 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. Language model Google BERT, Conversational Representations from Transformers, GPU, 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 first 7 hires of Bixby NLU, Built the multiple versions of Bixby English, Spanish intent classification models (in Galaxy S6, S7, S8 Bixby), NER models using supervised ml algorithms such as Bi-LSTM, 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; Shell Scripting; Klein; Kernel Programming; Databricks; Keras; Open CV.
- PyTorch; TensorFlow; Language modeling; Spacy; Azure; Cosmos Db; Sklearn; AWS; Docker; Rasa.