Amrit Bhaskar

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EDUCATION

Arizona State University, Tempe, Arizona

Aug. 2021 – May 2023

Master of Science in Computer Science

GPA: 4.0/4.0

Coursework: Machine Learning, Deep Learning, Natural Language Processing

Jadavpur University, India

Aug. 2013 – May 2017

Bachelor of Technology in Information Technology

TECHNICAL SKILLS

 $\textbf{Programming:} \ \ \text{Python, Pyspark, Scala, C/C++, MySQL, Java, HTML/CSS, Keras, Pytorch, Tensorflow, Tkinter, Tkint$

Scikit-learn, NLTK, pandas, NumPy, Matplotlib, SciPy, Shell Scripting

Softwares: AWS, Git, PyCharm, Jupyter Notebook, Linux

EXPERIENCE

Amazon May 2022 – Aug. 2022

Applied Scientist Intern, Payment Intelligence

Seattle, WA, US

• Customer credit model: Worked on enhancing the performance of one of the customer credit ML models. Enhanced the model performance by 1.24% in accuracy and 4.48% in AUC over the existing model in production.

Tiger Analytics

Nov. 2019 – July 2021

Senior Data Analyst

Bengaluru, India

- **Demand Forecasting for Taco Bell**: Developed a demand forecasting framework for Taco Bell. The error between the actual and predicted results was at least 10% better on average than the client's base model.
- AutoML Code Template: Developed an AutoML code template in pyspark for a Machine Learning Pipeline with Integrated Data discovery, Data processing, and Model building for solving frequent use cases and projects.
- Advisor segmentation for Equitable: Developed an advisor segmentation model for one of the American financial services and insurance companies based on agent's tenure, asset under management, products sold, etc.
- 90-day lapse model for Confie: Developed a 90-day customer policy lapse model with 82% accuracy.

Wipro AI Research Lab

Aug. 2017 – Oct. 2019

Project engineer, CTO Innovation Team

Bengaluru, India

- Relation Extraction: Developed supervised DL models using CNN and attention-based bi-LSTM with ELMO embeddings with 0.8 F-1 scores. Built, Presented, and Delivered frontend UI for internal use using Tkinter.
- Sequence tagging: Built a deep learning model for sequence tagging for accurate information extraction using GAN-based transfer learning between distant domains. Enhanced accuracy by 10% over the state-of-art results.
- Intent Detection with Zero-Shot Learning: Built an intent classification model using CNN and Capsule Network. Used zero-shot learning on intents when no labeled utterances are present with a 0.76 F1 score.
- Neural Machine Translation: Assessed and Tested approaches like Attention-based seq2seq and Transformer to create a single multilingual model for 7 Indian languages, achieved a BLEU score of 26.25 for Hindi-English.
- Document Clustering: Built an unsupervised document clustering model using K-means with 75% accuracy.

ACADEMIC PROJECTS

Arizona State University - Team Lead (Directed the team in both projects)

Aug. 2021 - Present

- Zero-Shot Relation Extraction: Built capsule network with collaborated zero-shot learning for relation extraction on unlabeled data achieving a 0.92 F1 score, analyzing ablation study of position embeddings. (link)
- Multi-modal Fact Verification System: Built a multimodal fact verification system on FACTIFY(Multi-Modal Dataset) with a 0.77 F1 score to compare the news claimed to be true to the actual documented news (link)

Publications & Patents

- * "Relation Extraction using Deep Learning", ADCOM 2018, (link)
- * "FACTIFY: A Multi-Modal Fact Verification Dataset", AAAI 2022, (link)
- * "Benchmarking Multi-Modal Entailment for Fact Verification", AAAI 2022, (link)
- * "Low Resource Sequence Tagging using Sentence Reconstruction", ACL 2020, (added to acknowledgments) (link)
- * U. S. Patent, publication number-US20200285932A1(pending): "Method and system for generating structured relations between words", Sep 10, 2020 (link)