Ananya Banerjee

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EDUCATION

University of Texas at Dallas, USA

- M.S in Computer Science with Specialization in Intelligent Systems — Aug 2018 – Jul 2020

Birla Institute of Technology and Science, Pilani Campus, Pilani, India

- M.Sc(Hons) in Mathematics — Aug 2013 – May 2017

RESEARCH EXPERIENCE

University of Texas at Dallas, Dallas, Tx

- Master Thesis titled ”Knowledge Infused Text to Scene Graph Generation” — Jan 2020 – Jul 2020
  - Working on infusing more complex forms of human knowledge and common sense reasoning to a deep learning model which takes text from user and creates a location aware and human knowledge based scene graph from the given text. Now, this scene graph can be used to construct a set of images that the user might imagine while the text was entered.
  - Advisor: Dr Jessica Ouyang, Assistant Professor at UT Dallas

Artificial Intelligence Institute, University of South Carolina, Columbia, SC

- Research Intern in AI — Aug 2019 – Dec 2019
  - Worked on infusing Knowledge to Computer Vision Models using Knowledge Graphs and language priors.This involved exploring techniques for Knowledge-driven Learning Approaches which are used at the intersection of Natural Language Processing and Computer Vision and creating a novel approach to perform Object Detection using Knowledge Infusion.
  - Supervisor: Dr Amit Sheth, Director of Artificial Intelligence Institute, University of South Carolina

Busigence Technologies, Gurgaon, India

- Data Science Associate (Research Intern for 5.5 months) — Jul 2016 – Dec 2016
  - Worked on several specialized projects in the areas of Machine Learning, Data Science and Adaptive Machine learning. The specialized modules included class imbalance, hyper-parameter optimization using Bayesian Approach and In-depth research for several Machine Learning Algorithms
  - Supervisor: Mr.Pranav Verma, CEO Busigence Technologies

SKILLS

Natural Language Processing, Machine Learning, Deep Learning, Data Science, Vision, Python, Java, TensorFlow, Pytorch

PROJECTS

University of Texas at Dallas, USA

- Information Extraction — Mar 2020 – Apr 2020
  - This project focused on extracting information from the given set of text documents using a combination of Semi-Supervised and Rule Based Approaches.
- Question Answering System Using First Order Logic — Feb 2020 – Apr 2020
  - This project focused on creating a Question Answering System in the Domain ”Groceries and Meat” using First Order Logic.
- Fake Opinion Detector — Jun 2019 – Jul 2019
  - In this project, the model was trained using Yelp’s NY restaurant reviews dataset and is capable of detecting fake reviews given to restaurants.
- Toxic Comment Detector — Jul 2019 – Aug 2019
  - In this project,„the model was trained using dataset of Wikipedia comments given in Kaggle’s Toxicity Detection challenge and is capable of classifying a given comment into toxic,severe toxic, obscene, threat,insult and identity hate.

Busigence Technologies, Gurgaon, India

- Finding solution to Class Imbalance — Jul 2016 – Aug 2016
  - This project involved extensive research on the existing techniques of solving class imbalance and devising an improved version of an existing class imbalance algorithm. Further Details cannot be revealed due to NDA signed.
- Hyper-parameter Optimization using Bayesian Approach — Aug 2016 – Oct 2016
  - This project aimed at finding ways to find optimal hyper-parameters for any Machine Learning and Deep Learning algorithm. I worked on deciding upon which optimization is most viable given a problem and a dataset.

- Modification of Deep learning and Machine Learning Algorithm Oct 2016 – Dec 2016
  - This project aimed at finding how several Machine Learning and Deep Learning Algorithms emerged, the maths behind them, how could they be improved and how one can regularize models depending on the choice of ML algorithm. I have studied algorithms like Logistic regression, K-Means, K-Median, hierarchical clustering, Deep Belief Networks, Restricted Boltzman machines, Perceptron and Multi Layered Perceptron

SCHOLARSHIPS

- **Jonsson School Graduate Scholarship** April, 2018
  - This is a competitive merit based scholarship which is awarded by the Erik Jonsson School of Engineering and Computer Science each year to select few incoming graduate students aiming to study at University of Texas at Dallas.