AMAN PRIYANSHU

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Exploring Tech through the Lens of AI, Cyber Security and Research. I am deeply passionate about Deep Learning, Cyber Security and the Research bringing together these two vast fields. Exploring opportunities to learn and grow.
Interests: Artificial Intelligence, Deep Learning, Reinforcement Learning and Cyber Security

EDUCATION

Bachelor of Information Technology, Manipal Institute Of Technology — *Expected 2023*
Cum. GPA: 8.39/10

EXPERIENCE

Cryptonite Student Project - Technical Head — *Aug. 2020 - Present*
Technical Head of the Cyber Security Student Project of Manipal, Cryptonite. Participated in multiple CTF competitions, currently ranked as 32nd in India on CTFtimes. Developed and led research projects on Federated Learning and Privacy Preserving Machine Learning.

Oniria Pets - Machine Learning and Web Crawling Intern — *Jan. 2020 – Feb. 2020*
Interned at Oniria pets as a Machine Learning and Web Crawling Developer for Data Extraction and Management. Employed BERT for precise feature extraction pertaining to hotel prices, billing systems, locations etc. on data scraped from Hotel Websites. Employed Selenium and Scrapy for extraction.

TensorFlow - Google Code-In Mentor — *Nov. 2019 – Jan. 2020*
Mentored for TensorFlow in Google Code-In to teach and encourage upcoming programmers (age 13-17). Contributed to Open-Source Development towards Tensorflow as well as completed various projects employing the same.

RESEARCH EXPERIENCE AND PUBLICATIONS

Stance Classification with Improved Elementary Classifiers Using Lemmatization (Grand Challenge) — *Sept. 2020*
Came Runners Up in the IEEE BigMM Data Challenge, we came up with a model for accurate classification of sensitive tweets for the #MeToo movement. We worked on a highly biased dataset by introducing concepts of under-sampling and lemmatization to improve performance of elementary classifiers. Allowing the model to operate and train under restricted resources. *LINK*

RELEVANT PROJECTS

Fed-PAQ Implementation — *Dec. 2020*
Created realistic simulations for the FedPAQ paper implementation. The analysis produces by my simulations further supports and improves the research presented within the paper and can act as supplementary material for the same.

Neural Embedding of Textual Data into Audio — *Jul. 2020*
Created a Deep Learning based Neural Embedding Model for encoding Textual Data (Plain Text) and an Audio File (Method of Transfer) into a single Audio File (Cypher Text). The model is an encoder-decoder based generative model which produces an Audio reconstruction error of 0.12 (MAE) and Textual reconstruction error of 1e-6 with 100% reconstruction accuracy. *LINK*

Deep Belief Networks for Pre-Training DNNs — *Mar. 2020*
Employed energy-based Deep Belief Networks for pre-training DNNs in PyTorch to produce a highly predictive network. Contributions include employing Adam within the DBN as well as energy smoothening, the development produced an increase of 28% from (67% to 95%) accuracy within the first epoch. *LINK*

AWARDS AND HONOURS

IEEE BigMM Data Challenge Runner's Up - created a multi-model classifier for Stance Detection for the #MeToo movement.
Intel Edge AI Scholarship Recipient – Received the Intel Edge AI Scholarship for learning on the edge deployment of ML.

RELEVANT COURSES

1. Deep Learning Specialization by deeplearning.ai
2. TensorFlow in Practice Specialization by deeplearning.ai
3. Introduction to Cyber Attacks by NYU

TECHNICAL STRENGTHS

Technical Skills: Machine Learning (NLP, CV, Multimedia, GANs, DL), Web Scraping and Database Management.
OS, Programming Languages and Tools: Linux, Windows, Python, C++, C, Java, Go, Tensorflow, PyTorch, MongoDB, Selenium and Scrapy.
Languages: English, Hindi and French.
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