RAZI MAHMOOD

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Skills Summary

- Deep Learning, Machine Learning, Data Science, Data Analysis, Statistics, Data Mining, Data ETL, Data Visualization, Big Data (S3, Hadoop), AWS, Technical Presentation Skills, Java/Python Development
- Python, Java, R, SQL, MATLAB, Jupyter Notebook, Deepnote, Visual Studio, IntelliJ, Eclipse IDE, Sublime, CoLab
- Pandas, Seaborn, Tensorflow, Keras, Pytorch, Scikit-learn, Numpy, Nltk, Gensim, Spacy, Matplotlib, U-Net, VGG16, ResNet50, DenseNet, BERT, Word2Vec, OpenAI models (GPT3, CLIP, DALL-E)

Education

B.A. in Data Science, University of California, Berkeley, May 2022

- Relevant Coursework: Natural Language Processing, Intro to AI, Data Science & CS Principles, Data Structures, Cognitive Science, Discrete Math & Probability, Deep Learning, Computer Architecture, Data Inference & Decision Making, AI Ethics, Domain Emphasis: Cognition.

Experience

IBM, San Jose, CA

Machine Learning Research Intern, Jan-Dec.2021

- Researched innovative machine learning algorithms for Watson AI Ops in Python focused on improved anomaly detection in IT logs (HDFS). Mentor: Dr. Rama Akkiraju, IBM Fellow, CTO AI Ops.
- The new ML model, ContrastBERT, achieved precision of 0.99 and recall of 0.93. Paper submitted to IJCAI.

Hyperfine Research, Inc., Guildford, CT

Machine Learning Intern, August-November 2021

- Developed automated image labeling algorithm in Python that extracted neurological disease labels from brain MRI report using NLP models. Extracted 7200 labels from 600 reports with 88% precision and 70% recall.
- Enabled rapid machine learning model build cycles to accelerate product development. Developed an ease-of-use interface to record clinician annotation leading to 10 fold decrease in data labeling time.
- Make technical presentations to the team on analysis results.

Xoran Technologies, Ann Arbor, *MI*

Data Science Intern, June- August 2021

- Developed Python code for image segmentation using SimpleITK, Numpy, Python, Keras, and Tensorflow libraries. Combined panoptic DL models from Computer Vision with U-net for head and neck cone beam CT achieving a Dice coefficient of 0.68 for 9 structures.
- Gave technical presentation and trained Xoran staff in using ITKSnap for 3D ground truth segmentation. Obtained hands-on experience of data preparation, cleaning, processing, and algorithms development.

Other Projects:

- As Academic Development Committee Member of the Data Science Society (DSS), mentored Data Science Capstone Projects for Annual Symposium. Led discussions and DeepNote walkthroughs.
- Participated in CalHacks Collegiate Hackathon. Developed a web app. in Python Flask and Swift to form a safety index for restaurants in Berkeley using neighborhood crime county data.
- Implemented a computer vision DL model for food recognition and linked to restaurants via geo and hashtags at SWAYD. Researched API/Platforms such as Postman, ClarifAI, and Google Maps API.
- Published 3 research articles in Proc. IEEE ISBI Conference (2015, 2022), AMIA, and 1 paper submitted to IJCAI'2022 conference based on research projects during internships. More details on https://razi-mahmood.github.io.