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Jesse Zexi Cai

EXPERIENCE

Blend San Francisco, California   *September 2017 - September 2018*
Machine Learning Engineer
- Implemented a LSTM-RNN model to replace a naive keyword based filter to flag complaints in user comments, improving P/R and accuracy from 70% to 90%.
- Deployed a multi-user data science toolbox with PySpark support.
- Applied deep learning NLP methods to categorize and cluster user reviews.
- Lead aforementioned technical projects and also mentored junior engineers.

Blend San Francisco, California   *June 2017 - September 2017*
Software Engineering Intern
- Trained an RNN to predict whether a user would submit a loan application given user activity chains with 90% accuracy.
- Created log ingestion pipeline via PySpark with immutable S3 data store.
- Deployed Airflow with CI/CD to standardize analytics and coordinate ETL jobs.

NASA Jet Propulsion Laboratory Pasadena, California   *June 2016 - January 2017*
Software Engineering and Computing Systems Intern
- Created web applications with Flask, Docker, and Elasticsearch.
- Used Stanford DeepDive and MITIE to create RDF triple stores for a question answering system built off of YodaQA.

EDUCATION

University of California Los Angeles   *September 2015 - Expected June 2020*
B.S. in Computer Science, Upper Division GPA: 3.59
- Operating Systems, Artificial Intelligence, Algorithms & Complexity, Computer Architecture, Linear Algebra, Probabilistic Programming & Relational Learning
- ACM AI President (2017). Received the ACM Student Chapter Excellence Award
- DevX Officer/Project Manager

PROJECTS

DistBelief
- Implemented DownpourSGD (asynchronous distributed training) in PyTorch.
- Reduced training time for AlexNet on CIFAR10 by 50 minutes (45%) vs. single-node SGD
- Wrote small message passing framework on top of PyTorch's native distributed point to point communication.

Twitter Sentiment Analysis
- Used Tensorflow to create an LSTM-RNN to predict the sentiment of tweets.
- Trained on ~10000 tweets with word embeddings and achieved a 70% test accuracy.

Technical Blog
- A technical blog about side projects and interesting ideas in computer science.
- Primarily focused on deep learning, distributed systems, and algorithms.

SKILLS

Fluent in Python, C, C++ • Competent in Scheme, Java, and Javascript
7+ years experience with GNU/Linux, the command line, and vim