jcjessecai@gmail.com • 510-298-2102 • https://jcaip.github.io

Jesse Zexi Cai

EXPERIENCE

Blend San Francisco, California *September 2017 - September 2018*
Machine Learning Engineer
- Deployed a LSTM-RNN model to identify complaints in user comments, improved P/R and accuracy from 70% to 90%.
- Applied deep learning NLP methods to categorize and cluster user reviews.
- Created and maintained scalable lambda event ingestion pipeline with PySpark.

Blend San Francisco, California *June 2017 - September 2017*
Software Engineering Intern
- Trained an RNN to predict loan application submission given user activity chains with 90% accuracy.
- Deployed a multi-user data science toolbox with PySpark support.
- Deployed Airflow with CI/CD to standardize analytics and coordinate ETL jobs.

NASA JPL Pasadena, California *June 2016 - January 2017*
Software Engineering and Computing Systems Intern
- Used Stanford DeepDive and MITIE to create RDF triples for a natural language question answering system.
- Created several APIs/backends with Flask, Docker, and Elasticsearch.

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.

PDB Evaluator
- Wrote query parser and first-order lifted inference algorithm.
- Used SQLite to achieve up to 4x speedup on inference on decomposable queries.

Technical Blog
- Primarily focused on machine learning, mathematics, and computer science
- Documentation of side/work projects, explanations of interesting concepts.

EDUCATION

UCLA *September 2015 - Expected December 2019*
B.S. Computer Science, Upper Division GPA: 3.5
- Coursework: ECE 239AS Deep Learning, CS 269 Natural Language Processing, CS 267A Probabilistic Programming & Relational Learning
- Technical Breadth: Mathematics (Linear Algebra, Real Analysis, Optimization)
- ACM AI President (2017). Received ACM Student Chapter Excellence Award

SKILLS

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