Jonathan Jin

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Experience

Spotify

Member of ML Platform.

Senior Machine Learning Software Engineer 03/2021–Present, New York

- Working on production-scale Kubeflow and TFX.

NVIDIA

Member of AI Infrastructure. Contributor to MagLev, NVIDIA's AI infrastructure for autonomous vehicle development. Also contributed to Modulus, the deep learning SDK for autonomous vehicle R&D.

Senior Systems Software Engineer, AI Infrastructure 12/2019–01/2021, New York

- Developing solution for "hybrid data/model parallelism" using a Ray-based parameter server design and Horovod to enable horizontally-scalable multi-task training
- Co-delivered a Kubernetes-based scheduling mechanism to enable priority access to cluster resources for select use cases, e.g. prep for upcoming external demos, via virtual "resource shares"
- Authored self-service, reproducible, and traceable workflows to generate consolidated mini versions of disparate production datasets, enabling rapid iteration/prototyping of training infrastructure refinements

Twitter

Member of Cortex, Twitter's central ML platform organization. Worked on: workflow orchestration; experiment management/iteration; and overall ML engineering productivity.

Machine Learning Software Engineer 08/2018–12/2019, New York

- Core contributor to ML Workflows, Twitter's Airflow-based platform for productionizing ML pipelines
- Spearheaded initial integration and cross-compatibility of TensorFlow Extended (TFX) with ML Workflows to increase agility of workflow development, iterative execution/experimentation, etc.
- Enabled distributed training of TensorFlow models in Apache Mesos from an Airflow pipeline via Deepbird, Twitter's TensorFlow-based model training/evaluating/serving framework

Uber

Member of Observability Applications. Worked on forecasting and anomaly detection for time series metrics.

Software Engineer 07/2016–07/2018, New York

- Re-architected time-series metric forecasting pipeline to support concurrent batch backfilling; reduced asymptotic burden on underlying data store by ~90% (see Writing)
- Extended M3-based anomaly detection platform to support multiple forecasting models; carried out migration to intercommunicating services with zero downtime and full backwards compatibility (see Writing)

OkCupid

Software Engineer 07/2015–07/2016, New York

Skills

Programming Languages: Python; Go; Bash; C++; Java
Machine Learning: Tensorflow; TensorFlow Extended (TFX); Ray
Distributed Systems: Kubernetes; gRPC; Protobuf
Infrastructure Tooling: Bazel; Prometheus; SwiftStack; Grafana; M3; Cassandra; Airflow

Education

University of Chicago

B.S. Computer Science, B.A. Economics September 2011–June 2015