# JONATHAN JIN

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## SELECT WORK EXPERIENCE

**Humane Intelligence**  Feb 2024 – Current
**Engineering Advisor**  New York, NY

*"Fractional" tech lead and architect. Partner with the CEO to define and execute on engineering strategies, including hiring and vendor selection. Contribute in hands-on capacity for technical proofs-of-concepts.*

**Spotify**  Mar 2021 – Mar 2024
**Senior Machine Learning Engineer**  New York, NY

*Senior member of the ML Platform organization; contributed to and maintained Hendrix, Spotify's centralized machine learning platform. Primarily focused on managed multi-tenant compute infrastructure for Kubeflow and Ray in GCP. Later shifted focus to AI/ML governance and artifact/experiment management solutions.*

- Contributed to technical evaluation of Ray for adoption into the Hendrix platform; collaborated with the Ray maintainer team at Anyscale to identify functionality gaps and steer Ray development roadmap, e.g. of Ray AI Runtime; informed the development of Hendrix's initial centralized multi-tenant Ray instructure based on KubeRay;
- Spearheaded development of Hendrix Registry as part of company-wide AI/ML governance initiative; collaborated with stakeholders in Legal, Trust & Safety, etc. to deliver a Backstage-based model card solution, resulting in over 100 models registered by 40 teams company-wide in less than a quarter;
- Brought Hendrix's flagship Kubeflow-based orchestration product to general availability; defined multi-quarter engineering roadmap in collaboration with product and engineering stakeholders across ML Platform and user teams; contributed to increase in Hendrix adoption of 50% and increase in measured user satisfaction of 10%;
- Active mentor and career coach to junior IC team members across the ML Platform org. Successfully identified and carved out long-term areas of ownership for two junior ICs that have since become defining pillars of their respective careers.

**NVIDIA**  Dec 2019 – Jan 2021
**Senior Systems Software Engineer, AI Infrastructure**  New York, NY

*Worked on AI infrastructure for autonomous vehicle research and development.*

- Implemented prototype for horizontally-scalable model-parallel training for multi-task learning using parameter server approach based on Ray and Horovod;
- Implemented a custom Kubernetes scheduler for preemptible workloads and resource reservations in an on-prem GPU cluster

**Twitter**  Aug 2018 – Dec 2019
**Machine Learning Software Engineer**  New York, NY

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

- Enabled distributed training of TensorFlow models in Apache Mesos from an Airflow pipeline via Deepbird, Twitter's TensorFlow-based model training/evaluating/serving framework

## EDUCATION

**University of Chicago** *B.S. Computer Science, B.A. Economics*  2011 – 2015

## SPEAKING

**TWIMLcon AI Platforms**, "How Spotify is Navigating an Evolving ML Landscape with Hendrix Platform"  Oct 2022
**MLconf**, "Empowering Traceable and Auditable ML in Production at Spotify with Hendrix"  Mar 2022
**KubeCon + CloudNativeCon**, "Scaling Kubeflow for Multi-tenancy at Spotify"  Oct 2021

## SKILLS

- **Programming Languages**: Python, Go, C++, Java
- **Machine Learning and MLOps**: Ray, Kubeflow, Airflow, TensorFlow
- **Infrastructure and Distributed Systems**: Google Cloud (GCP), Kubernetes, Terraform, Prometheus, gRPC, Docker