

Jonathan Jin

Machine Learning Infrastructure Engineer

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SELECT EXPERIENCE

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| 12/2023 03/2021 | Spotify SENIOR MACHINE LEARNING ENGINEER <i>Worked on Hendrix, Spotify's centralized ML platform.</i> <ul style="list-style-type: none">➤ Tech lead for Hendrix's experiment-tracking layer. Led team of four engineers to deliver an MLflow-based MVP in half a quarter. Responsible for defining the strategy and roadmap for experiment-tracking and artifact management within Hendrix;➤ Spearheaded the development of the Hendrix Registry as part of company-wide AI/ML governance initiative; collaborated with stakeholders in Legal, Trust & Safety, etc. to deliver an AI system and model card solution based on Backstage and Kubernetes-based declarative infrastructure in under a quarter, resulting in over 100 models registered by 40 teams company-wide in less than a quarter;➤ Led multi-quarter promotion of ML Platform's flagship Kubeflow-based orchestration product to general availability; collaborated with product and engineering stakeholders across peer teams within ML Platform as well as "power user" teams – other applied ML teams at Spotify – to: define multi-quarter engineering roadmap; provide technical and project leadership/direction. Contributed to an increase in ML Platform adoption of 50% and increase in user satisfaction of 10%.➤ Providing ongoing mentorship and support to three junior IC team members, i.e. half of the team's IC makeup; holding bi-weekly one-on-ones with each to: provide technical and career mentorship; help identify potential future ownership areas and unblock existing ones; and address ongoing concerns.➤ Bootstrapping early-stage development of centralized, managed Ray infrastructure based on KubeRay for high-performance ML prototyping and experimentation; collaborating with product and engineering leadership to concretize our platform's long-term Ray strategy; <div>Ray Kubernetes Go GCP Backstage Terraform Helm TensorFlow TFX Kubeflow Prometheus gRPC</div> | New York |
| 01/2021 12/2019 | NVIDIA SENIOR SYSTEMS SOFTWARE ENGINEER, AI INFRASTRUCTURE <i>Worked on AI infrastructure for autonomous vehicle research and development.</i> <ul style="list-style-type: none">➤ Initiated development of 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"; <div>Ray Horovod TensorFlow Kubernetes Helm gRPC Bazel SwiftStack</div> | New York |
| 12/2019 08/2018 | Twitter MACHINE LEARNING SOFTWARE ENGINEER <i>Member of Cortex, Twitter's central ML platform organization. Worked on: workflow orchestration; experiment management/iteration; and overall ML engineering productivity.</i> <ul style="list-style-type: none">➤ Spearheaded initial integration of TensorFlow Extended (TFX) with legacy Airflow-based orchestration platform to increase agility of workflow development, iterative execution/experimentation, etc.➤ Enabled distributed training of TensorFlow models in Apache Mesos from an Airflow pipeline via Deeplib, Twitter's TensorFlow-based model training/evaluating/serving framework <div>Apache Airflow Apache Aurora TensorFlow</div> | New York |

SPEAKING

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

SKILLS

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| Programming Languages | Python, Go, C++, Java |
| Machine Learning and MLOps | Ray, Kubeflow, Apache Airflow, TensorFlow, TensorFlow Extended (TFX) |
| Infrastructure and Distributed Systems | Google Cloud (GCP), Backstage, Kubernetes, Terraform, Prometheus, gRPC, Docker |

EDUCATION

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| 2015 | University of Chicago , B.S. Computer Science, B.A. Economics |
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