James Meickle

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About

Founding engineer and infrastructure lead with over 10 years of experience accelerating AI/ML startups in regulated industries. Specialized in working directly with researchers, supporting the scientific Python ecosystem, and operating Kubernetes clusters on multiple clouds.

Experience

Roboticist *(MLOps, DevOps, and Build Teams)* 02/2024 – Present
Robotics and AI Institute – Cambridge, MA

- Administrator for GKE and on-prem Kubernetes clusters (35,000 cores, 500 GPUs) hosting container workloads including LLM training, model serving, and CI runners.
- Wrote strategy for re-implementing a failing robotics monorepo in Bazel, and secured migration roadmap approval from 10+ independent research team leads. Helped to hire and onboard newly created Build team while embedding for 6 months, resulting in a system with 10-100x faster builds and a >90% reduction in build failures.
- Founding member of cross-team security committee and architect of security controls including GCP deployment environments, GitHub multi-org migration, and cloud SIEM.
- Earned a HackerOne bounty for discovering an access control bypass in GitHub Actions.
- Designed and implemented org-wide Datadog deployment for observability and on-call rotations. Introduced incident response and postmortem culture to an existing non-SRE team.

Founding Engineer 03/2022 – 11/2023
Tome (acquired by AngelList) – Remote

- Designed, implemented, and obtained SOC 2 for seed-stage LLM legaltech startup.
- Worked with law firm security and risk teams to obtain approvals for signing "early adopter" deals that allow private model training on proprietary contract data.
- Aligned all TensorFlow/Keras serving, Python services, and data pipelines on continuous delivery, distributed tracing, and centralized logging.

Principal Infrastructure Engineer 06/2020 – 01/2022
Catchlight (Fidelity Labs at Fidelity Investments) – Remote

- Secured enterprise-wide approval for Terraform as an infrastructure-as-code tool and coached other teams on adoption and best practices.
- Accelerated production deploy frequency 10x by building containerized CI/CD pipelines with Jenkins, Kubernetes, Kaniko, and Terraform.
- Integrated conversion ML model with Elasticsearch while remaining compliant with security, data protection, and regulatory standards.

Site Reliability Engineer / Senior Site Reliability Engineer 03/2017 – 04/2020
Quantopian (acquired by Robinhood) – Boston, MA

- On-call SRE embedded with a hedge fund quant research team focusing on fund trading, data science, and machine learning.
- Eliminated 90% of overnight PagerDuty incidents by migrating fund trading from `cron` scheduling to Apache Airflow running on Kubernetes pods.
- Prototyped 50% cost reduction of Python trading algorithms by refactoring trade simulation monolith as elastic serverless execution and analysis using Kubernetes, Argo Workflows, Amazon S3 and Amazon Athena.
- Designed self-service GitHub PR flow for Kubernetes CI/CD, including on-demand developer environments using Helm and *garden.io*.

Site Reliability Engineer 05/2015 – 02/2017
Center for Brain Science at Harvard University – Cambridge, MA

- Wrote a Python framework for high reliability statistical processing of petabyte-scale MRI brain scan data using SLURM to schedule tasks on HPC cluster hardware.
- Designed research data pipeline to cope with 5x data volume due to increased voxel density and app-based research subject data including phone logs and GPS coordinates.
- Converted existing `cron` task scheduling to Buildbot with support for retries, backfills, and on-demand jobs.

Education

Central Connecticut State University 2005 – 2010
Bachelor of Arts, Psychology & Political Science

Writing and speaking

- *Cooperative Economics for Engineers* (presented at multiple DevOpsDays, 2019-2020)
- *Beyond Burnout* (Ch. 29 of *Seeking SRE: Conversations About Running Production Systems at Scale*, ed. Blank-Edelman, pub. O'Reilly, 2018)
- *Sell Cron, Buy Airflow: Modern data pipelines in finance* (ODSC East 2019, PyData DC 2018, Velocity New York 2018)
- *Ansible for SRE Teams* hands-on training course (O'Reilly Safari, Velocity New York 2018, SREcon18 Americas)

Technologies

Languages: Python, Go, Rust, bash

Technologies: Linux, Kubernetes (GKE, EKS, on-prem), Helm, ArgoCD, Docker, Terraform, Amazon Web Services, Google Cloud Platform, Bazel, GitHub Actions, Datadog, Apache Airflow