Matthew Weiden

Contact Information

278 Monroe Drive, #17
Mountain View, CA 94040

(650) 885-0025
matthew.weiden@gmail.com
https://mweiden.github.io

About

engineering management, project management, software engineering, distributed systems

Computing

Languages: Python, JavaScript, Bash/Zsh, HTML/CSS, Scala, Java, C/C++

Frameworks: Terraform, React, Numpy/Scipy/Pandas, Spark, Crunch, Hadoop, Twitter Finagle

Databases: MySQL, PostgreSQL, DynamoDB

Platforms: AWS, Kubernetes, Docker

Professional Experience

Chan Zuckerberg Initiative — Redwood City, California

Engineering Manager | Single-Cell Engineering Team — November 2019 - Present

The Single-Cell Engineering Team provides engineering support to the Science Initiative's Single-Cell Biology Program.

- Managing development of two projects: cellxgene, a visualization tool for single-cell expression matrices, and Corpora, a data portal with harmonized datasets enabling integrative single-cell analysis.

Engineering Manager | Science Platforms Team — February 2018 - October 2019

The Science Platforms Team built software and fostered collaborations within the biomedical scientific community in order to develop high-scale, cloud-based compute platforms for the single-cell analysis ecosystem.

- Managed CZI's software contributions to the Human Cell Atlas Data Coordination Platform including its authentication/authorization framework, data upload API, expression matrix API, and observability framework
- Partnered with engineering teams at the University of California: Santa Cruz Genomics Institute, the European Bioinformatics Institute, the Cherry Lab at Stanford, and the Broad Institute of Harvard/MIT

Backend Engineer | Science Tools and Platforms Team — November 2017 - January 2018

Joined the Science Tools and Platforms Team to work on technology contributions to the Human Cell Atlas.

- Delivered the first iteration of a logging and monitoring system

SoundCloud Ltd. — Berlin, Germany

Engineering Manager | Content Identification Team — July 2016 - October 2017

The Content Identification Team built audio fingerprinting systems and copyright protection services to keep SoundCloud compliant with terms negotiated with Sony, Warner, and UMG.

- Hired four engineers, bringing total team size to five
- Led the implementation of Agile practices including Kanban, Grooming, WIP limits, and frequent retrospectives
- Redesigned the team's KPIs to better monitor its impact on company-wide KPIs and cost
- Developed a Jira integration used by 18 different teams at SoundCloud to monitor Lead Time, Cycle Time, bugs, cumulative flow, and code inventory
- Developed a strategy to improve product development flow that resulted in a 30% reduction of SoundCloud's code inventory and a reported 29% reduction in the average lead time of its teams

- Wrote technical reports for legal, rightsholder management, and funding purposes
- Managed contracts and integrations with Audible Magic, a third party contractor

Backend Engineer | Trust, Safety, & Security Team November 2012 - June 2016

The Trust, Safety, and Security team provided SoundCloud's information security, anti-spam, and anti-abuse services.

- Implemented microservices and batch jobs for detecting spam, platform abuse, and terms of service violations
- Trained machine learning models for detecting spam, designed/conducted experiments to validate model performance, and deployed models to production
- Participated in risk-management exercises for estimating the company's risk liability
- Redesigned the team's KPIs to monitor the impact of spam and abuse on company-wide KPIs and cost

HRL Laboratories Malibu, California

Research Vendor | Information and Systems Sciences Lab June 2011 - October 2012

Implemented machine learning software for an EEG-based brain-computer interface and conducted behavioral experiments for the CT2WS project led by the Defense Advanced Research Agency (DARPA).

University of California, Los Angeles

Research Assistant | Computational Learning and Vision Lab Spring 2008 - Summer 2010

Worked with professors Hongjing Lu and Alan Yuille to develop behavioral experiments and implemented machine learning algorithms that model human and rat behavior.

Publications

Lu, Weiden, & Yuille (2009), "Modeling the spacing effect in sequential category learning." *Advances in Neural Information Processing Systems 22 (NIPS 2009)*

Weiden, Khosla, & Keegan (2012), "Electroencephalographic detection of visual saliency of motion towards a practical brain-computer interface for video analysis." *International Conference on Multimodal Interaction 2012*

Education

University of California, Santa Barbara

M.Sc. Computer Science September 2012

University of California, Los Angeles

B.S. Cognitive Science; Computing Specialization September 2009
B.A. Art September 2009

Practical Information

Citizenship US National

Languages English (native speaker), German (C1)