Matthew R. Weiden

CONTACT INFORMATION

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INTERESTS

engineering management, project management, product development flow, data mining, machine learning

PROFESSIONAL EXPERIENCE

SoundCloud Ltd. Berlin, Germany

Content Identification Team: Engineering Manager **July 2016 - Present**

Leads the Content Identification Team in building audio fingerprinting systems and copyright services. Focuses on supporting engineers, making business metrics visible, product development flow, and project management.

- As a hiring manager, built up a team from one engineer to five
- Holds weekly one-on-one meetings with reports and writes feedback focused on performance review and professional development
- 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 set of simple visual controls to help engineering managers improve their project management
- Wrote a report with recommendations on optimizing product development flow that are being adopted company-wide; their adoption has correlated with a 30% reduction of SoundCloud's code inventory and a reported 29% reduction in the average lead time of its teams
- Writes technical reports for legal, rightsholder management, and funding purposes
- Manages contracts and integrations with Audible Magic, a third party contractor

SoundCloud Ltd. Berlin, Germany

Trust, Safety, & Security Team: Backend Engineer (level 3/5) **November 2012 - June 2016**

Worked with security engineers in building anti-spam and anti-abuse systems that leverage data science and defensive network security strategies.

- Implemented microservices and batch jobs for detecting spam, platform abuse, and terms of service violations
- Trained machine learning models and designed experiments for validating their performance
- 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

Information and Systems Sciences Lab: Research Vendor **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, Santa Barbara

Office of Governmental Relations: Intern **December 2011 - June 2012**

Helped organize higher education advocacy events, analyze legislation, and promote the University of California's legislative program.

Teaching Assistant **Intermittent, January 2011 - June 2012**
Led sections on parallel computing and introductory programming. Duties included leading sections, holding office hours, grading, and writing course materials.

- The parallel computing courses covered message passing using MPI and multithreading using Intel Cilk Plus at both undergraduate and graduate levels
- Introductory programming helped introduce fundamental computer science concepts to first year engineering students using MatLab

University of California, Los Angeles

Computational Learning and Vision Lab: Research Assistant **Spring 2008 - Summer 2010**
Worked with professors Hongjing Lu and Alan Yuille in developing behavioral experiments and implementing machine learning algorithms that model human and rat behavior.

Reasoning Lab: Research Assistant **Spring 2007 - Spring 2008**
Worked with Mimi Liljeholm, a postdoctoral researcher writing software in Matlab and Java for use in experiments and assisting in experimental design.

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*

Open Source

Streaming Parallel Decision Tree: decision tree implementation with online learning

Sketchy: an event processing network for spam detection and prevention

Alyssa: A simple LISP interpreter

Computing

Languages Scala, Python, C/C++, Bash, MatLab, HTML/CSS, MySQL

APIs Spark, Crunch, Hadoop, Numpy/Scipy/Pandas, Twitter Finagle

Platforms Kubernetes, Docker

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 Native English Speaker, German (C1)