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--about

I am a software engineer who likes music, computers, and the future — I'm looking to work with folks who are interested in the same.

--experience

Bandcamp / Epic Games, Senior Software Engineer: 11/2021 - 10/2023

I worked on payments engineering and payments processing at Bandcamp; I worked closely with stakeholders on the Epic side on compliance issues around tax processing and tax validation, and helped fix tax liabilities of ~\$100,000 / month, due to poor address resolution. I also contributed to testing best practices and to modernizing our testing code — I created the first test database at Bandcamp, and was the first person to regularly run tests. I evangelized modern software engineering practices (testing, code reviews, CI, CD, metrics, etc), as well as focusing on refactoring and optimization of Bandcamp's 15-year-old codebase. (Ruby, Javascript, knockout.js, Liquid, CSS, dbt, BigQuery, GCP, svn)

Spotify, Senior Engineer: 03/2016 - 11/2021

I helped Spotify do amazing, musical crossfades. I worked full stack (data & machine learning pipelines, backend services, internal websites, client work), and drove the project forward by leading product & planning discussions. Prior to that, I helped design & build a custom audio processing pipeline which enabled a team of machine learning researchers to share their data with the rest of the company. On the non-technical side, I led a group that made our technical interview process better, and helped lead a group that made Spotify a better place to work for underrepresented engineers. I started and helped moderate company-wide discussions of ethics in content recommendation and content moderation.

(Java, Apollo, Scala, Scio, Python, TensorFlow, JavaScript, React, GCP, Bigtable, Dataflow, git)

Drip.com, Lead Engineer: 02/2015 - 03/2016

I had overall technical responsibility for Drip.com, from setting software engineering policy to keeping the website stable. I led and mentored two other engineers, and worked with the product team to define new functionality. I took the codebase from fewer than 50 tests to over 400 tests, and from “scared to deploy” to deploying multiple times per day. Along the way, I

modernized the payment system, added VAT support, updated the audio encoder, and built many other key features.

(Ruby, Rails, Grape, RSpec, SideKiq, JavaScript, Angular, git, AWS, HTML / CSS, Agile)

The Echo Nest / Spotify Boston, Part-Time Junior Engineer | Intern: 05/2011 - 11/2014

I maintained and tested a fleet of web crawlers, wrote new crawlers, and wrote web applications to keep them under control – I also wrote scripts to validate data from those crawlers and correct bad / stale data. I maintained the Remix API (algorithmically remix any song!) and its documentation.

(Python, JavaScript, HTML / CSS, git, SVN, Agile, Unit Testing, MySQL)

SoundCloud, Web Development Intern: 05/2010 - 08/2010

I worked on adding to and improving the core HTTP API, as well as our libraries for various languages. I also provided support and bug fixes for API users.

(Ruby, Rails, Python, PHP, MySQL)

--skills

Languages: Python, Java, JavaScript, Scala, Ruby, HTML / CSS, PHP

Frameworks: Apollo, Scio, React, Angular, Rails, Grape, Kubernetes

Data: MySQL, Postgres, Redis, Cassandra, Bigtable, Dataflow

Meta: git, SVN, Agile, AWS, GCP, software testing, technical writing.

Metameta: Talking with humans, learning new things, being on time.

--education

M. A. Music Technology, McGill University: 2012 - 2014.

B. Sc. Music / Computer Science, University of Victoria: 2007 - 2011.

--thesis & publications

Musical Mapping of Two-Dimensional Touch-Based Control Layouts. Master of Arts thesis, McGill University, Music Technology, 2014.

(<http://tide-pool.ca/papers/Thor Kell - MA Thesis.pdf>)

A High-Level Review of Mappings in Musical iOS Applications, with Marcelo M. Wanderley. Proceedings of the Sound & Music Computing Conference 2014.

(tide-pool.ca/papers/Thor Kell - SMC 2014.pdf)

Empirical Analysis of Track Selection and Ordering in Electronic Dance Music Using Audio, with George Tzanetakis. Proceedings of the International Society for Music Information Retrieval 2013. (tide-pool.ca/papers/Thor Kell + George Tzanetakis - ISMIR 2013.pdf)

A Quantitative Review of Mappings in Musical iOS Applications, with Marcelo M. Wanderley. Proceedings of the Sound & Music Computing 2013. (tide-pool.ca/papers/Thor Kell - SMC 2013.pdf)