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I'm located in the San Francisco Bay Area and I am authorized to work for any employer.

Technologies I've worked with:

Python, Java, Go, C, Rust, Haskell, SQL, AWS, JavaScript, React, PostgreSQL, Lisp, Terraform, Erlang.

Other skills:

Mentoring, communication (in my work, I think hard how to empathize with people I work with), research.

I have experience in AdTech and billing, obtained from my work experience.

Education: Master of Science, Aalto University, Finland, 2018

I've been a computer person my entire life from a young age and I do a lot of recreational coding on my free time. I am at my strongest in challenging programming tasks that require a lot of knowledge, or tasks where learning quickly is paramount.

Example: When the LLaMA large language model was released, I wrote an implementation of it from scratch in Rust, which involved writing tensor operations from nothing, reverse engineering and replicating Python unpickling to read the weights efficiently, adjusting OpenCL to make it run faster etc. (there's a link to the project at the bottom)

Employment:**Pinterest Inc 2021 - 2022**

Title: L5 Software Engineer

I was doing Python and Java coding for the Billing Team, writing and designing systems to handle money. I helped design and write reliable, self-healing systems that would detect and correct mistakes automatically. I used my knowledge and experience in data pipeline design to write integrations with third party companies, sometimes with problematic API designs, to save Pinterest as much time and money as possible. I used SQL, Presto and Spark to research internal company ad spending anomalies and wrote and presented results to non-technical stakeholders.

NextRoll 2015 - 2021

Title: Senior Staff Engineer

I wrote Go, Rust, Python and Java, I lead teams, and I designed data pipelines and did SRE-like work, setting up AWS infrastructure and writing lots of Terraform.

I worked in the measurement team as the technical lead. I helped maintain and design infrastructure, using Terraform, AWS and other tools. I worked on a Go-written log processing infrastructure, filtering fraud events and cleaning data. I worked on a Rust-written system that computes machine learning features in real-time in response to traffic. I designed custom binary formats to cheaply compute and exchange certain types of data: e.g. a bipartite graph data for a cross-device graph. I participated in hiring and contributed to hiring philosophy and questions. I participated in W3C discussions pertaining to ad measurement when third-party cookies are phased out, and made a SPURFOWL proposal to the group.

Other projects:

<https://github.com/Noeda/rllama>

From-scratch implementation of LLaMA large language model, in pure Rust without using a third-party tensor library. This is my most Internet famous project.

<https://junethack.net/>

I am active in the NetHack community and participated in the creation of an annual tournament for the game. The website is written in Ruby.

<https://github.com/Noeda/mj-lstm/>

CPU implementations of some recurrent neural network models and training code.

<https://github.com/Noeda/mmapurl>

Proof of concept for memory mapping files from AWS S3, so that touching the pages will load the data from S3, using Linux kernels' `userfaultfd()` feature.

<https://github.com/Noeda/dfterm3>

Haskell implementation of a hack on Dwarf Fortress that makes the game playable by multiple people over the Internet.

<https://github.com/AdRoll/batchiepatchie>

Golang-written UI for AWS Batch, developed at AdRoll/NextRoll and later released as open source.

<https://github.com/Noeda/submarination>

Submarine-themed text-based Roguelike.

<https://github.com/Noeda/adeonbot>

Haskell-written NetHack-playing bot