Elias Kassell

Software & Data Specialist

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UK & US Citizenship

Employment

Google

DEC 2020 ONWARDS

Dataform: As one of the few Google Cloud engineers in London, I've been continuing to collaborate with the original Dataform team to transform our acquired startup product into a GCP product. The projects I've been the main developer for have been stateless web hosted Git APIs, K8s deployments of our GKE based microservices, exposure of pods in this deployment for service discovery, and secure sandboxing of untrusted user javascript.
Likert: As a minor project, I've been improving infrastructure for a research project based around using humans-in-the-loop for improving the quality of datasets used for ML.

Tech: Kotlin, Go, Terraform, Kubernetes, Blaze, Angular, many GCP APIs, many internal frameworks

Dataform

DEC 2019 TO DEC 2020

A team of 7, we built a product that was acquired by Google 18 months after the initial product release (11 months after I joined). I worked on the SQLX framework, led projects from product design through execution, and was on call for site reliability. I wrote a blog post about some of the public things I built while here.

Tech: React, Typescript, Kubernetes, NextJS, Bazel, Google Cloud, Go, BigQuery, Redshift, Azure SQL Data Warehouse, Snowflake, Redis, Go, Protobufs, Monitoring, Stackdriver, Alerting

Illumina

JUN TO SEPT 2019

As a data science intern I won the "Most Professional Intern" award. I developed a tool for automating final quality classification of genomes using data from the 100,000 genomes project.

Tech: Python, Numpy, Pandas, Scikit, Pytest, Sphinx, Pytorch, Jupyter Notebook, AWS HPC Cluster.

Children With Cancer UK

APR TO JUL 2016

As a Database & Business Intelligence Programmer, I scraped and analysed data from the UK charity commission, creating a network of trustees. I also developed a prototype app for a charity initiative involving urban collectables, interacted with via QR codes.

Tech: Python, Android, Java, Backendless, SQL, Excel

Education

University of Bristol

SEPT 2016 TO JUL 2019

BSc Computer Science, First Class

Blueprint: Highest scoring final project in the year. A game that is easiest described as a mix of Pokémon Go and Minecraft. Users collect resources outside using a Microsoft Hololens, which are then made available on a desktop client. A team of 6; we used Agile development, mainly Scrum.

Tech: Hololens, C#, .Net, Android, Java, Swift, Unity, Azure, Go, Docker, Docker Swarm

Bristech SRM: A speaker relationship management system for Bristech, a monthly tech meetup.

Tech: Android, Heroku, Firebase, MySQL

HPC Optimization: Dramatically optimised a Lattice Boltzmann fluid simulator (1000x speedup).

Tech: C, OpenMP, OpenMPI, OpenCL

Additional

Latent Dimensionality Reduction

AUG 2019

A novel algorithmic method for interpreting black box models, which I developed when exploring secondary metrics in relation to F1 scores of variant calls of platinum genomes, and got permission to open source. Interpret how the value of feature subsets affect predictions, make predictions using subsets of features, and visually interpret how well a model understands a feature space.

My Blog

JUN 2019 TO PRESENT

I explore a wide variety of problems, providing my interpretation and solutions for them.

Tech: Microsoft Azure, Google Cloud, AWS, NextJS, Microservices, Postman, Jekyll, Python, Distributed DBs, Dimensionality Reduction, ...

MOV38

SEPT 2017 TO JUN 2019

I developed several algorithmic trading methods and a fundamental analysis valuation model of Apple. I also developed a Dot Collector implementation, as described by Bridgewater Associates.

Tech: Quandl, Quantopian, Zipline, Sentdex, G Suite