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Job goal

- I am looking to solve big customer problems, by untangling messy, ambiguous data puzzles.
- I see my high business impact as being a function of getting grounded cognitive empathy for the customer combined with getting a big picture of the data flow.

Entrepreneurial, scrappy work style

- work across silos to deliver
- write Amazon 6-pagers to discover better solutions
- question assumptions with counterfactuals to innovate
- use cognitive empathy to dive into the data's human relevance

Notable successes as a data leader

- earned a PhD, designed metrics that reflect nuanced inequality concerns
- led a company's switch to a microservice paradigm
- got a company's 1st language AI feature unstuck and launched
- got a company's largest analytic feature launched from scratch
- built observability systems for three companies from scratch
- built a scraper to circumvent LinkedIn's bot detection system
- helped nudge a delivery engineering team to be a product team
- engineering expertise in distributed backend systems
- built Splunk and Tableau BI dashboards

Leadership style

1. Questioning - cognitive empathy to get context to execute the below points.
2. Visioning - win-win attitude that results in joyful effort over obfuscating
3. Coaching - top-down feedback, smaller chunks, metrics, short-cuts
4. Serving - bottom-up feedback, documentation discipline, blockers

Job experience

Technical AI Product Manager, consultant at SimpleLegal, 2022-2023

SimpleLegal software is a tool for big companies to manage bills from their vendor law firms. Before I arrived, my employer's new language AI feature for flagging suspicious invoice lines was stuck for one year because of bad performance, even after investing in more human annotation. My job was to increase AI performance. The result was we launched the AI feature and won an AI Excellence Award.

I changed our priorities from increasing data quantity to increasing data quality.

- I asked the President to convene an Amazon 6-pager meeting to share the results of the gathering mission, outlined below.
- I built relationships with five experts across the conglomerate.
- The annotation expert opened my eyes to treat the offshore annotators as creative partners. Success depended on getting their feedback for the continuous improvement of the annotation guidelines and AI flag definitions.
- I nudged the data scientists to articulate the biggest issue as *"garbage in, garbage out"*.
- I connected with a Founder (VP of Product) at a sister company who translated for me the customer meaning behind the legal invoice line-item data.

Managed the Senior Data Scientist consultant, offshore annotators, and the subject-matter expert

- I added the subject-matter expert to our team.
- I included the offshore annotators and subject-matter expert into a continuous improvement collaboration on AI flag definition and annotation guidelines.
- I changed the annotation process to small batches
- I started inter-annotator performance metrics and reviews.
- To build cognitive empathy, I labeled several hundred sentences. As a result, I identified convoluted annotation guidelines as the root cause of our poor labeling quality.
- The technical vision I set for the data scientist and I was to launch an MVP in six months by discovering "low-hanging fruit" that could scale back the machine learning effort. This resulted in scaling back our machine learning from eleven to three redefined classifiers. The triage was to kill one classifier that was never needed, replace two with expert rules, and stop the labeling on five whose performance was sufficient.
- To increase clarity, I coached the team to understand the customer meaning behind the data and the AI flags.
- To increase clarity, I crunched the knowledge of the Data Scientist's metrics analysis into a working paper, which was continually shared at the weekly check-ins.
- I wrote the data scientist a stellar performance review, highlighting his acumen at articulating complex concepts to executives.

Managed the engineering tasks

- I assigned Jira issues to engineers.
- 1:1 meetings with the VP of Engineering.
- After one engineer left for another company, I stepped in to refactor the inference server.

Lead Analytic Endpoint Engineer at Sight Machine, 2018-2021

The Sight Machine product is a performance dashboard tool for process engineers at factories.

- To get the company's biggest public-facing feature, Recipes, across the GA line, I worked across silos (Customer Success, DevOps, Data Engineers). I wrote high-level design papers to help the Product and Customer Success teams understand the time cost of competing technical design decisions, arming them with a conceptual framework to gather more information from the customer on her priorities.
- I started a new checklist process to lock down successful sales demos.
- I nudged the engineering team to move from a delivery team to a product team. The Director of Engineering and I started a new process where the engineers fleshed out their own Jira issues. The new technical design autonomy reduced engineering toil and increased creativity.
- I built the first distributed tracing (Lightstep), which made debugging system downtime easier.
- I proposed and delivered a new standardized frontend development environment. The innovation made debugging and on-boarding easier.
- I coached junior engineers in systems thinking.

Lead Data Engineer at HiQ Labs, 2015-2018

The HiQ product predicted the likelihood that an employee would quit.

- I led the move from a monolith to a microservice paradigm. I led a Data Engineer to guide the Data Scientists to refactor each component of their monolith into a docker container service. I explained to management the technical and human vision behind the microservice paradigm.
- I owned the scraping part of the pipeline. The puzzle for the CTO and I was to figure out how to get around LinkedIn's bot detection in order to scrape millions of HTML public profiles, the raw data for our prediction pipeline.
- I led a Junior DevOps engineer to build a Splunk observability system that was used to track performance and experiments on different spider configurations.
- I trained a Junior Data Engineer to maintain the scraping system.
- I shadowed the Data Scientists to see what I could automate for them.
- I migrated the Data Scientists from Mongo queries to PySpark.

Start-up partner and full-stack developer at Map Decisions, 2014

Map Decisions was a mobile app, which I built, to automate street sign inspection for city Public Works departments.

Start-up partner and analytics developer at Geoscore, 2014

Geoscore (repo) was an app to compare and visualize neighborhoods based on user livability preferences. We ran Google Ad experiments around an SEO strategy of user's entering addresses in Google search queries.

Developer at Urban Mapping, 2011-2013

Urban Mapping provided a geodata REST API to Tableau and other customers.

- I built the observability system (Splunk).
- I created a new performance metric for map tile rendering.
- I built the CI pipeline (Jenkins).
- I built a Tableau BI Dashboard

Misc leadership roles

- I coached students in Medellín, Columbia to make ClusterPy.
- I coached graduate students and taught spatial statistics, as a PhD.
- Kids snowboard instructor at Vail Resorts, CO.
- Restaurant Assistant Manager at Vail Resorts, CO.
- Lead analyst at California Business Magazine. CA. We collected data for large newspapers to rank their local companies.
- Counselor for emotionally disturbed children. Seneca Institute. CA.

Open source code and writing

- *What does the Lean Startup approach have to do with language AI?*
- A play Ethereum MEV bot
- A git bare approach to version control your dot files
- Work papers
- PhD thesis. *Assessing Inequality using Geographic Income Distributions*
- *Spatial Econometrics* entry. Encyclopedia of Human Geography. 2009.
- *Interactive spatio-temporal modelling of health systems*
- *σ-convergence in the presence of spatial effects*
- *Integrating Econometric and Input-Output Models in a Multiregional Context*