

# Boris Dev

## Role: AI Engineer

### Tools

- Engineering Stack: Python, Linux, Flask/Django REST API, SQLAlchemy, Angular, AWS, Docker, Kubectl, Rancher
- Observability: OpenTracing, Lightstep, Splunk, Tableau, Grafana
- Data Science: Pandas, PyTorch, PySpark, Geospatial, sklearn
- Language AI (LLM): LangChain, LangSmith, GroundTruth & SageMaker

### Notable successes

- new [CPAL LLM Chain](#) - first causal LLM chain. [Tweet by LangChain](#)
- new algorithm to reduce LLM inference load by 80% and 10x ground truth
- new backend analytics endpoint for company's biggest feature
- new observability system for two companies
- new language AI feature for one company
- new microservice paradigm for one company
- new geospatial human inequality metrics (PhD research)

### Style

- tackle cross-silo, ambiguous, high impact problems
- tackle process friction with innovation
- dive into the semantic nuances of the data

### Job experience

#### Engineer consultant at Intuitive Systems, 2023

Intuitive System's is an early stage start-up building language AI applications for vendor management and customer complaint triage.

- canonicalization algorithm and data curation
- prediction evaluation
- inference server system design
- high-level advice to founder

#### Engineer consultant at SimpleLegal, 2022-2023

SimpleLegal is a legal billing analytics company.

- Changed the direction from data quantity to data quality.
- Built relationships with five experts across the conglomerate.
- Managed the offshore annotators.
- Started inter-annotator performance metrics and reviews.

- Identified convoluted annotation guidelines as the root cause of our poor labeling quality.
- Led the Senior Data Scientist and the subject-matter expert.
- Led the engineering tasks.
- Built SageMarker inference server

### **Lead Analytic Endpoint Engineer at Sight Machine, 2018-2021**

Sight Machine is a manufacturing analytics company.

- 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**

HiQ Labs was a people analytics company.

- 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 an asset management company for city Public Works departments.

- I built a mobile app to automate street sign inspection.

### Start-up partner and analytics developer at Geoscore, 2014

Geoscore was a company for demographic analytics.

- I made the analytic endpoints.
- I ran Google Ad experiments around comparing SEO strategies.

### Developer at Urban Mapping, 2011-2013

Urban Mapping provided geospatial analytics to Tableau.

- I created KPIs.
- I built the CI pipeline (Jenkins).
- I built the observability system (Splunk, Tableau BI Dashboard).

### Misc leadership roles

- I gave technical vision to 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.
- Counselor for emotionally disturbed children. Seneca Institute. CA.

### Open source code and writing

- [Langchain PR: Causal Program-aided Language \(CPAL\)](#)
- [Normalize tables using a LLM](#)
- [How can language AI performance be raised with cognitive empathy?](#)
- [A play Ethereum MEV bot](#)
- [Small commit to shell-ai](#)
- [A git bare approach to version control your dot files](#)
- [Work papers](#)
- [Geoscore \(repo\)](#)
- PhD thesis. *Assessing Inequality using Geographic Income Distributions*
- *Spatial Econometrics* entry. Encyclopedia of Human Geography. 2009.
- *Interactive spatio-temporal modelling of health systems*
- *$\sigma$ -convergence in the presence of spatial effects*
- *Integrating Econometric and Input-Output Models in a Multiregional Context*