

# Boris Dev, Data Science Engineer

## Tool Stack

- **Data Analytics:** SQL, Python, SQLAlchemy, Pandas, PySpark, Git, GeoSpatial Stats & Maps, Prometheus, Grafana, Tableau, Splunk, ELK, OpenTelemetry
- **Data Pipelines:** Jenkins, Kafka, SQLAlchemy, Postgres[GIS]
- **Data Science:** Pandas, Sklearn, Numpy, Plotly, PySpark, DataBricks, Jupyter, SageMaker, PyTorch, GroundTruth, Pydantic Agents (learning), Sentence Transformers (fine-tuning)
- **Langauge AI:** Embedding DBs (Weaviate, ElasticSearch)

## Education

PhD in Quantitative Human Geography, at SDSU and UCSB, 2015. Data science for location referenced social science problems. Dissertation: [Assessing Inequality using Geographic Income Distributions](#)

## Experience

### Nobsmed, 2024, Founder

Built <https://nobsmed.com/> for users to search for biohacking experiences found in clinical studies and Reddit comments.

- ETL: Language AI parsing of 100,000 studies and 1,000,000 Reddit comments.
- Topic modeling: Extended Bertopic using LLM for naming and classification of outliers, [bertopic-easy](#).
- Customer discovery and user interviews.
- Experimented with fine-tuning opensource embeddings model and ML classification.
- Prompt engineering using InstructorAI.
- Embedding DBs for search (Weaviate, ElasticSearch).

### AI Engineer consultant at Wolf Games, 2023

- Built an automated DAG of LLM prompts for story generation
- Worked closely with the CTO on requirements
- Built the story generation Flask API service

### AI Engineer consultant at Intuitive Systems, 2023

- NED (Name Entity Disambiguation) of vendor receipts fed into AMD's sales analytic pipeline. Used LangSmith for evaluation.

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

SimpleLegal is a legal billing analytics company.

- launched a previously stuck AI feature to flag invoice billing discrepancies
- was first to provide metric documentation at the meetings
- trained 8 ML classification models to flag suspicious invoice line items
- redesigned and managed 5 workers on the annotation pipeline of the labels
- built the inference server (SageMaker, PyTorch) and its product integration

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

Sight Machine is a manufacturing analytics company.

- led backend engineering on biggest public facing analytic feature
- coordinated QA process with sales and engineering
- built company's first distributed tracing
- containerized frontend engineering development environment

### **Lead Data Engineer at HiQ Labs, 2015-2018**

HiQ Labs was a people analytics company.

- built and owned the scraping system and observability (Splunk)
- led the migration from a monolith to a micro-service paradigm
- supported the data science team's migration to DataBricks PySpark and microservices

### **Developer at Urban Mapping, 2011-2013**

Urban Mapping provided geospatial analytics to Tableau.

- Formulated first map rendering and query performance metrics integrated into our CI/CD pipeline

### **Impactful projects**

- persuaded team that our culprit was data quality, not data quantity, to get a stuck AI feature launched.
- proposed and built observability systems to reduce firefighting.
- proposed and built containerized FE dev env for faster onboarding.

### **Papers and code**

- LLM Topic Modeling: [bertopic-easy](#).
- [Language AI Evaluation 101: Know your user](#)
- [Langchain PR: Causal Program-aided Language \(CPAL\)](#). See Harrison Chase's [Tweet](#).
- [Work papers](#)
- [Academic papers](#)