David Brackbill

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EXPERIENCE

Software Engineering Consultant @Symbium   **Sep 2022 - Sep 2023**

- Developed a batch ETL process to synthesize 125 quarterly recurring data sources using PostgreSQL and Pandas, replacing around 40 hours of manual work per quarter cleaning, validating and ingesting data into Neo4j and MySQL
- Created a Redis-based task queue to perform periodic updates to Neo4j graphs and MySQL tables using Node.JS functions, delivering automated data checks and updates
- Scaled ETL scripts to use three times less memory, avoiding intermediary file writing and associated costs in AWS EC2, by implementing stream processing into AWS S3
- Triaged and quartered response times of key external API calls using async Python

Data Engineering Intern @Symbium   **Mar - Aug 2022**

- Maintained REST APIs and libraries across the Node.js and Python codebases
- Analyzed user data for the Product team and CTO using DuckDB

PROJECTS

Diction

- Library allowing users to traverse Python objects using GraphQL strings
- Written in Python and supports a subset of GraphQL operations making nested field access of large payloads easier

Bayesian Basketball

- Tool to determine change in NBA player true skill based on rolling evidence
- Uses hierarchical Bayesian models via the PyMC3 library to update skill game-by-game
- Predicted durable skill change with statistical significance over the 2023 NBA season

SKILLS

- **Languages**: Python, Node.js, R, Clojure, Bash
- **Libraries**: Spark, Pandas, Polars, TensorFlow, Selenium, Mocha, Express
- **Databases**: PostgreSQL, MySQL, Neo4j, DuckDB, Redis
- **Tools**: Airflow, DBT, Git, Docker, venv, Linux, AWS EC2/S3

EDUCATION

Statistics and Data Science, BS @UC Santa Barbara   **Dec 2021**

- **Coursework**: machine learning, NLP, statistical analysis, database management