Daniel Melchor

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EXPERIENCE

Stripe July 2023 - Present
Software Engineering - Data Transformation Team *Remote*
- Developed a TrinoSQL to SparkSQL translation engine and static type inference with 98% accuracy
- Built CLI to streamline creation, testing and execution of ETL jobs using Airflow and Spark
- Lead development of Java gRPC service and Go proxy enabling dynamic creation of over 3k SQL-based ETL pipelines
- Utilized Aurora PostgreSQL database to store and dynamically instantiate Airflow orchestrated Spark jobs
- Designed and implement Next.js frontend to configure the SQL-based ETL pipelines
- Stack: Scala, Python, Java, Go, Aurora PostgreSQL, Apache Spark, Apache Airflow, Next.js

Stripe May 2022 - August 2022
Software Engineering Intern - Payments Dashboard Team *South San Francisco, CA*
- Built an end-to-end data product to surface customer analytics for 14M+ customers to enable SaaS-related workflows in the Stripe Dashboard with a reach of 460k MAU
- Wrote product and technical specification from feedback and UXR to tackle top ask from companies like Whimsical
- Reduced customer dashboard latency from 346ms to 19ms (95% improvement) by adding inverted index to Pinot
- Stack: Scala, Ruby, TypeScript, Apache Spark, Apache Airflow, Apache Pinot, React

BastionZero February 2022 - May 2022
Software Engineering Intern - Core Infrastructure & API *Boston, MA*
- Allowed customers to interactively request and grant access to infrastructure targets through an API
- Ensured integrity of new system through cryptographic processes like signature verification and JWTs
- Stack: Node.js, TypeScript, C#, ASP.NET Core

Intellygenz June 2021 - August 2021
Software Engineering Intern - Machine Learning Team *Madrid, Spain*
- Increased accuracy from 14% to 59% by developing and fine-tuning ML model from pre-trained BERT to extract entities from business telecom emails
- Supervised model's training, testing, and validation of 60,000+ emails
- Stack: Python, PyTorch, NumPy, Pandas, Scikit-learn

Towards Data Science July 2021 - September 2021
Independent Writer *Remote*
- Wrote articles for a publication with 500,000+ readers about different aspects of Machine Learning

PROJECTS

MindMap January 2024 - Present
- Fast and efficient semantic search engine built in Rust to generate and search embeddings for your notes

ASL-to-text - Project Leader (team of 3) November 2022
- Won HackHarvard 2022 with a 3D hand-gesture recognition PointNet neural network using only a webcam

BU Nexus - Project Leader (team of 5) February 2021 - December 2021
- Led development to renovate Boston University's registration tool used by 30,000+ students
- Created graph-based schedule generation algorithm to recommend courses based on prerequisites and major

EDUCATION

Boston University
Computer Science, B.A. *September 2020 - May 2023*
- Computer Science GPA: 3.72/4.00
- Honors & Awards: Dean's List (all semesters), Upsilon Pi Epsilon (Computer Science Academic Honor Society)

OTHER INFORMATION

Languages: Spanish (native), English (full professional proficiency), French (limited working proficiency)