

# Daniel Melchor

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## EXPERIENCE

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### Stripe

July 2023 - Present

*Software Engineering - Data Transformation Team*

*Boston, MA*

- 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

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### 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

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### 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

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