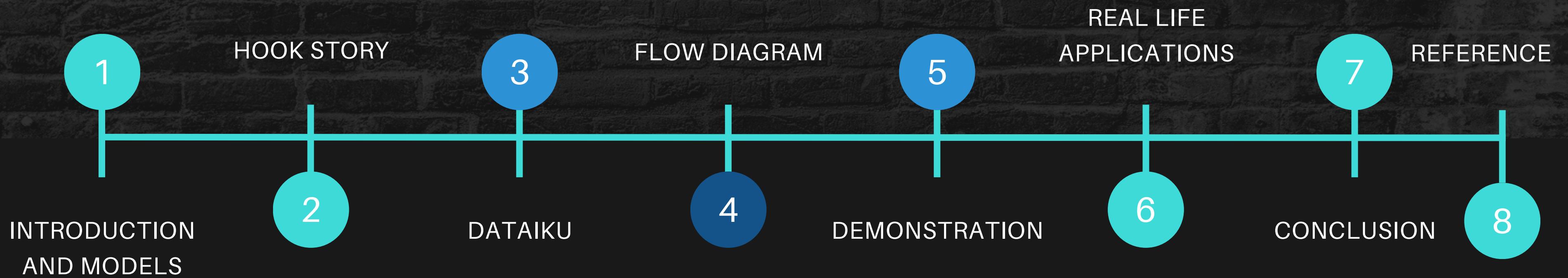




FUTURE LOCATION PREDICTION SYSTEM

PRESENTED BY
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DATA SCIENCE INTERN
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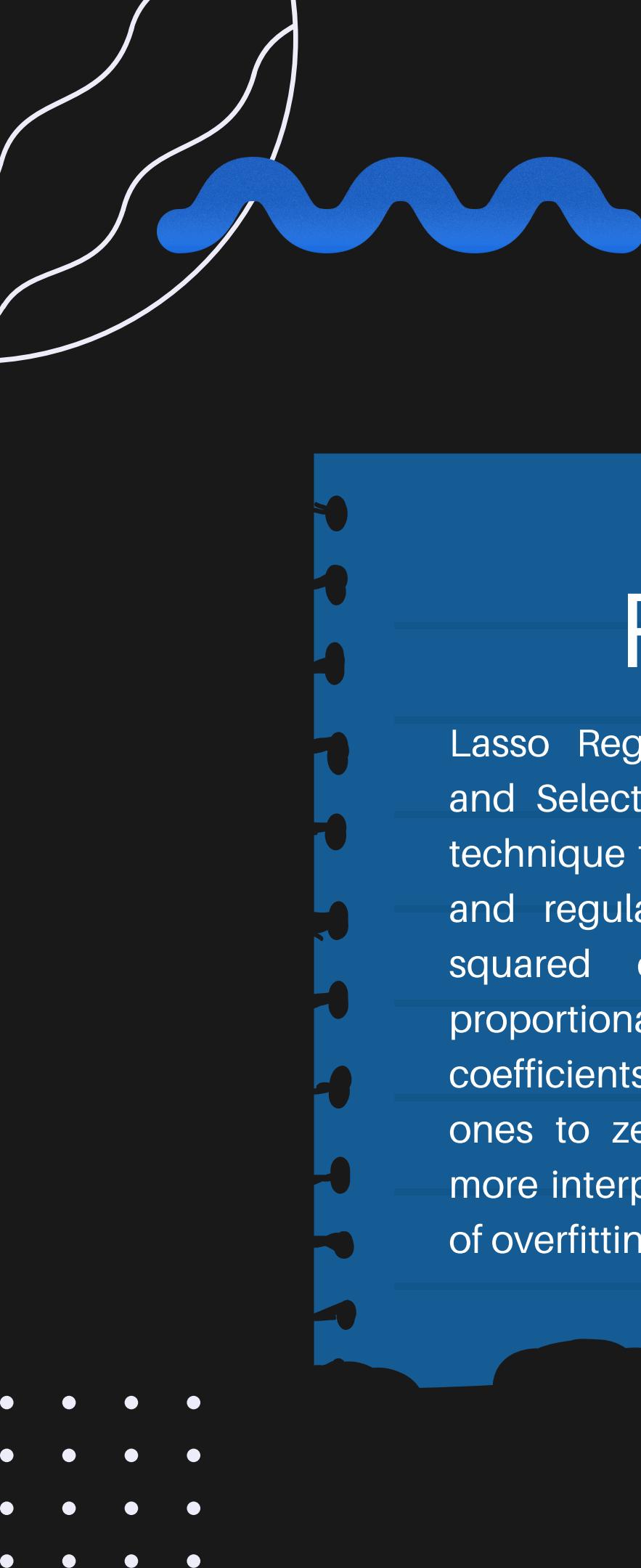
PREFACE



1. INTRODUCTION

A Future Location Prediction System uses data science to predict where individuals or objects are likely to move next based on patterns in historical and spatial data. By leveraging tools like Dataiku Data Science Studio (DSS), it simplifies building accurate and insightful models. This system showcases how technology can transform data into meaningful predictions for smarter decision-making.





MODELS

LASSO REGRESSION

Lasso Regression (Least Absolute Shrinkage and Selection Operator) is a linear regression technique that performs both variable selection and regularization. It minimizes the sum of squared errors while adding a penalty proportional to the absolute value of coefficients, effectively shrinking less important ones to zero. This helps in building simpler, more interpretable models and reduces the risk of overfitting.

XG BOOST

For longitude prediction, we used the XGBoost model, which is highly effective for structured data. XGBoost works by sequentially optimizing errors through gradient boosting, making it ideal for capturing complex patterns. Its built-in regularization helps prevent overfitting, ensuring robust and accurate predictions.

2.HOOK STORY

It's a sunny Monday morning, and Aisha steps out of her apartment, scrolling through her phone. She's planning a quick coffee before heading to work. As she walks, her phone buzzes with a notification: "[Morning boost? Get 25% off on lattes at Cafe Bliss, just two blocks away.](#)" Surprised, Aisha glances at the offer, realizing it's right on her route. She decides to check it out.

Unknown to Aisha, behind this seamless experience lies NextMove AI, a cutting-edge future location prediction system. By analyzing her routine—her commute patterns, frequent stops, and even her speed of walking—NextMove AI predicted she'd pass by Cafe Bliss at this very moment. The system partnered with local businesses to serve personalized, location-based deals just when she'd need them most.





But this isn't just about coffee. Companies are leveraging this technology for diverse applications:

- **Retailers send curated discounts when customers are near their stores.**
- **Fitness brands nudge users to stop by nearby gyms.**
- **Entertainment apps suggest movie tickets or nearby events on a Friday evening.**

Imagine the possibilities: businesses connecting with customers like Aisha in real-time, turning everyday commutes into tailored, interactive experiences. Future location prediction isn't just a tool—it's a bridge between intent and action, reshaping the way the world moves and interacts.

So, where will you be tomorrow? With NextMove AI, someone already knows.





3. DATAIKU



dataiku

Dataiku DSS offers powerful tools for machine learning, AI, and advanced analytics.

Dataiku DSS streamlines the entire data science workflow, from data preparation to deployment.

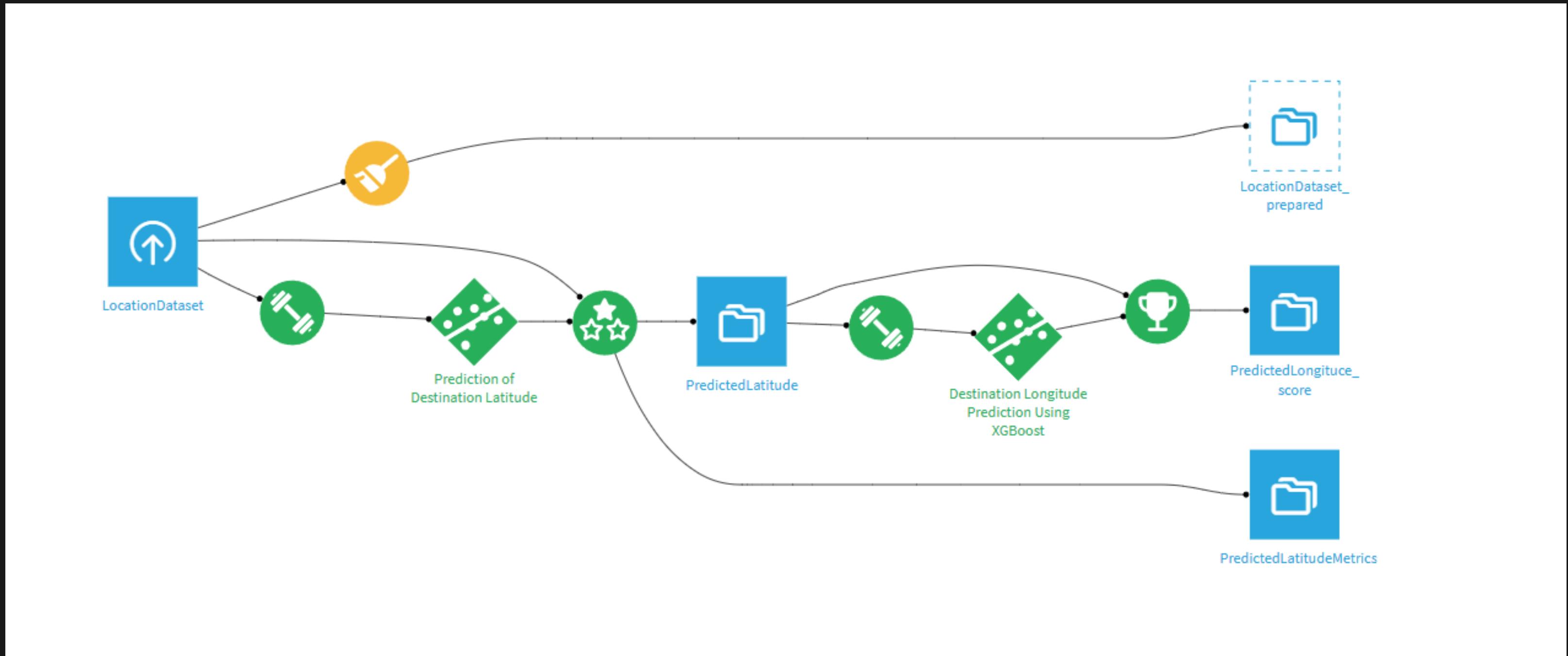
It simplifies model building, experimentation, and productionization, reducing time-to-value.

It supports both technical and non-technical users, promoting collaboration across teams.

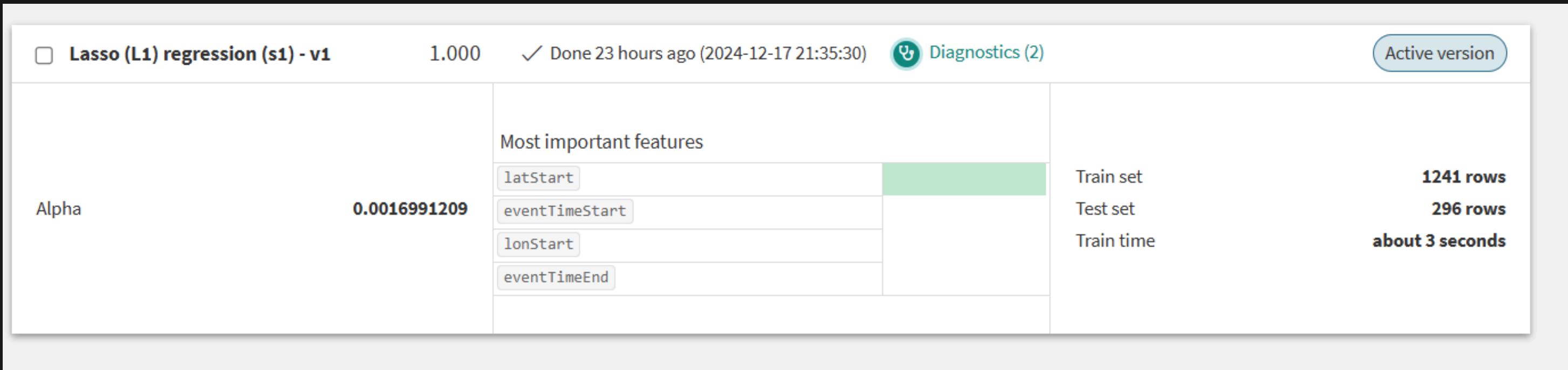
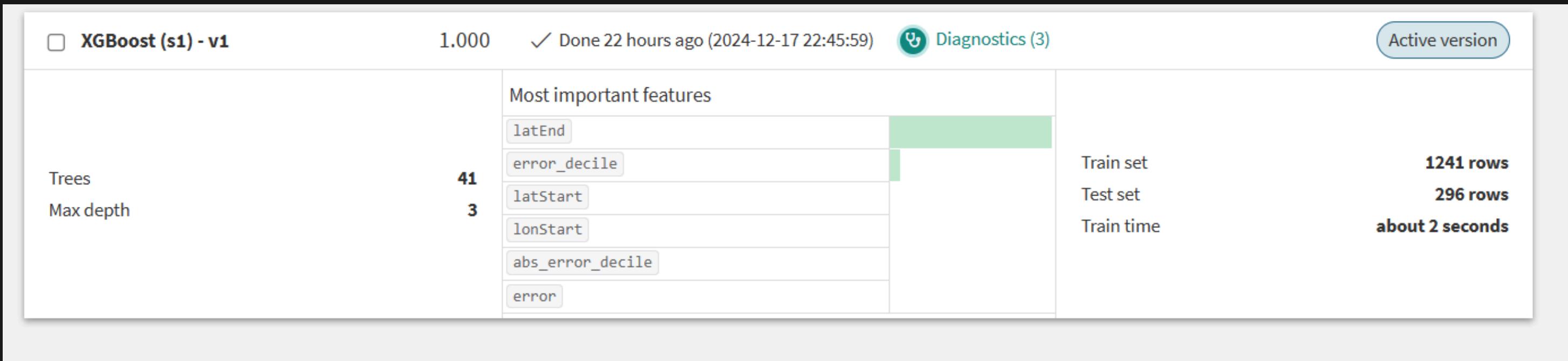
The platform fosters data-driven decision-making by bridging the gap between data science and business objectives.

The platform integrates with a wide variety of data sources, including cloud, on-premises, and real-time data streams.

4.FLOW DIAGRAM



DEMONSTRATION



5. REAL LIFE APPLICATIONS

01

Urban Planning

02

Real Estate
Development

03

Transportation
Networks

04

Resource
Allocation

05

Emergency
Response
Planning

06

Business
Expansion
Strategies

6. COCLUSION

This project not only predicts future locations but empowers organizations to make informed decisions, driving efficiency, growth, and innovation that shapes the future of how we live, work, and thrive.

7. REFERENCES

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Thank you!