Explainable Monitoring Using Fiddler and ONNX

Krishna Gade
Founder, CEO
krishna@fiddler.ai

Matan Broner
Software Engineer, Intern
matan@fiddler.ai
AI teams are flying blind

“…we believe all companies should disclose their algorithms, moderation policies, and data flows to regulators”

Kevin Mayer, Frmr. CEO

Model Transparency

Model Drift

Model Bias

Model Compliance

FORTUNE

This is not a drill: The coronavirus pandemic is testing A.I.’s ability to handle extreme events

The New York Times

Apple Card Investigated After Gender Discrimination Complaints

The Washington Post

JPMorgan settles federal mortgage discrimination suit for $55 million
The Dark Truth About AI

Most models are a black box

- **No Visibility** into model performance
- **No Monitoring** to catch potential bias or drift
- **No Explanations** of model behavior

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**Business User**
- “Can I trust our AI?”

**Customer Support**
- “How do I answer this complaint?”

**IT & Operations**
- “How do I monitor and debug?”

**Data Scientists**
- “How does this model work?”

**Auditors & Regulators**
- “Are these decisions fair?”
THE LEADERSHIP TEAM

Pioneers of Explainable AI Platform

Krishna Gade
FOUNDER/CEO
15 yrs of data/ML leadership

Amit Paka
FOUNDER/CPO
15 yrs of product innovation leadership

Manoj Cheenath
FOUNDER/CHIEF ARCHITECT
20 yrs of infra architecture leadership

Deeply Experienced Team with Enterprise DNA

$14.2M raised in Seed & Series A
The right solution is an “APM” for AI & ML

A System of Record for

Product Teams

DevOps Teams

AI & ML Teams

Explainable Monitoring

What is happening? Why is it happening?

- Visibility across models
- Performance and bias monitoring
- Granular explanations of data & models
- Critical alerts and insights

HAVE TOOLS

NEED TOOLS
Unlocks the full value of AI by building in trust

FIDDLER IS THE FIRST

Explainable Monitoring Solution for AI

Unlocks the full value of AI by building in trust
Fiddler Illuminates the Black Box

**Online**
- Streaming Data
- Serving Pipeline

**Offline**
- Static Data
- Training Pipeline

ML Model

- Monitor
- Analyze
- Explain
Problem: AI/ML models have version compatibility issues

Fiddler is building a platform for all model frameworks, but maintaining specific package versions is difficult.
Solution: utilize ONNX as a intermediate step in model ingestion
How Fiddler uses ONNX

Customers provide an ONNX model or use Fiddler package to auto-convert existing models.

Fiddler’s backend uses the ONNX runtime to serve models and predictions.

Customers use Fiddler with no changes to their model experience.
What’s next for Fiddler and ONNX?

- Automated model conversions using Fiddler’s SDK
  - Customers should be able to provide a model and its metadata, and be given an auto-generated ONNX model
- Continuing to add support for community driven model adapters
  - Expand beyond TF, SKlearn, and Pytorch
- Potential for custom model adapters