ML4PM 2024
FIFTH INTERNATIONAL WORKSHOP ON
LEVERAGING MACHINE LEARNING IN PROCESS MINING

Process Mining the Scikit-Learn Way: Introducing SkPM

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Process Mining the Scikit-Learn Way: Introducing SkPM

Our Tutorial

01

Why another library?

02

SkPM!

03

Practice

04

Key takeaways

01 Why another library?

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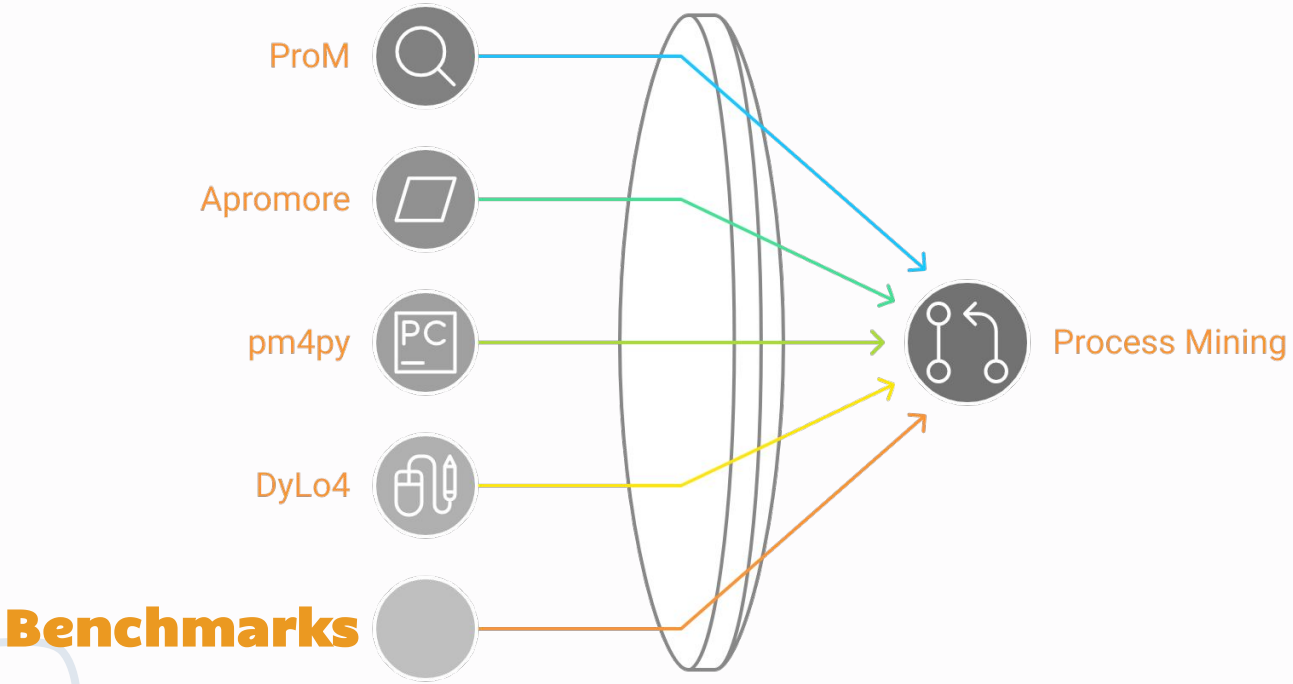
01 Why another Library?



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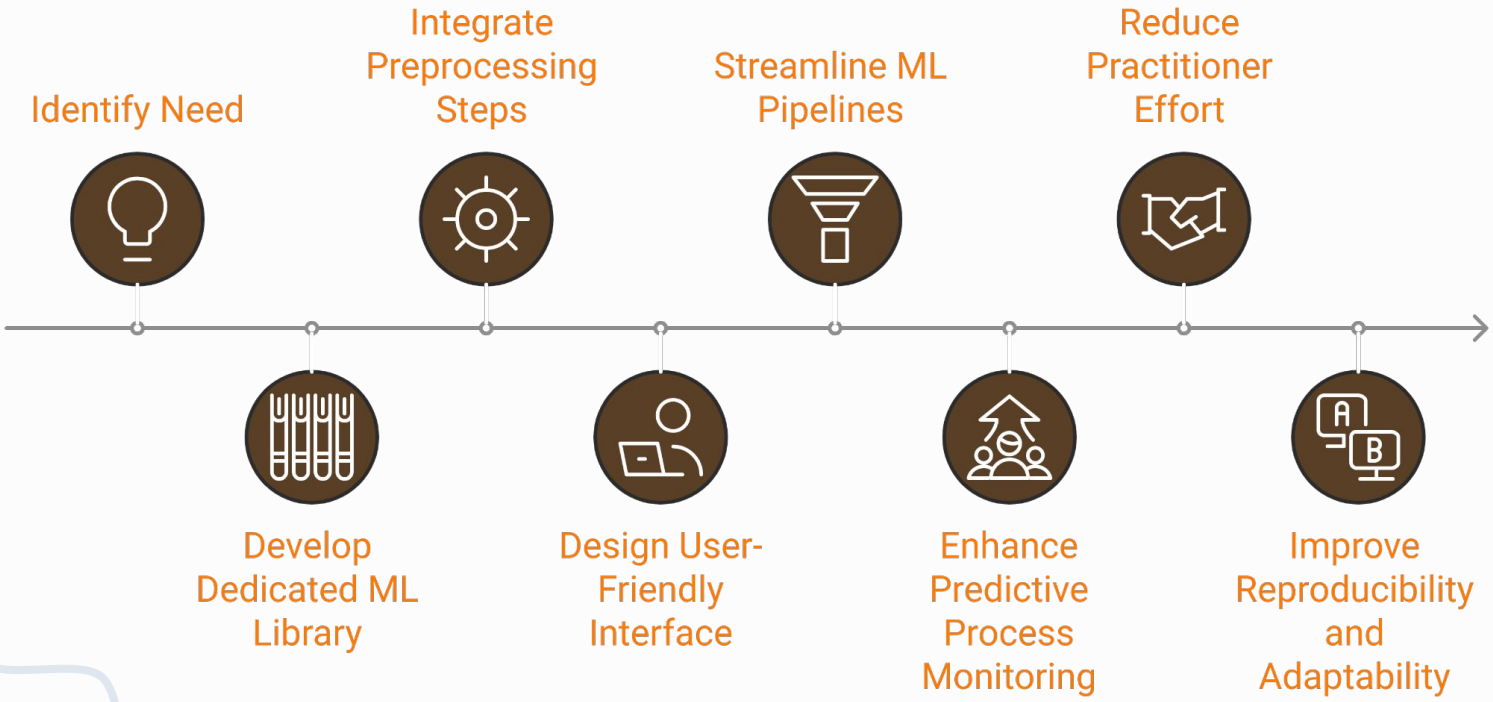
01 Why another Library?



Process Mining the Scikit-Learn Way: Introducing SkPM

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2

SkPM!

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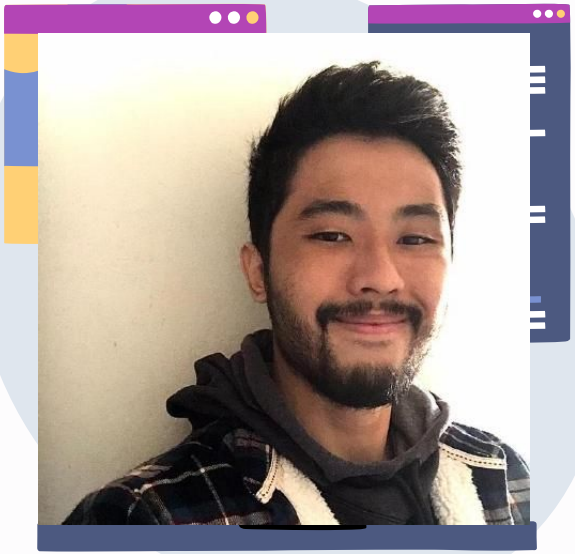


WHO DEVELOPED IT?

Rafael Seidi Oyamada

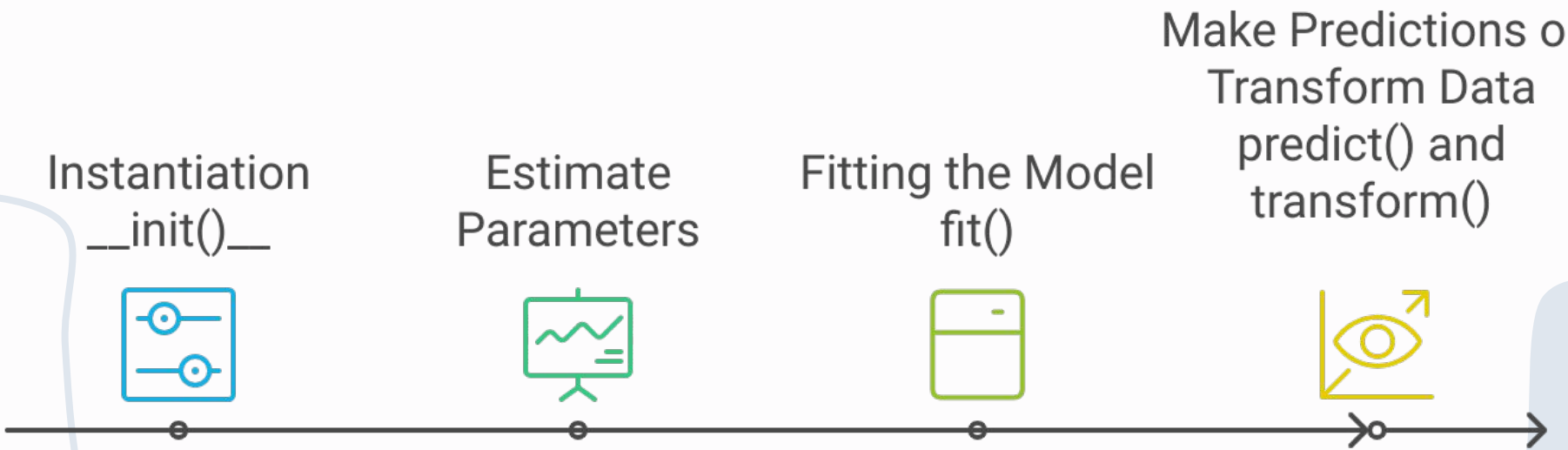
A Scikit-learn Extension Dedicated to Process Mining Purposes (Extended Abstract)

Rafael Seidi Oyamada[1,*], Gabriel Marques Tavares[2], Sylvio Barbon Junior[3] and Paolo Ceravolo[1]

https://github.com/raseidi


SkPM

02 SkPM


Instantiation
__init()__
Estimate
Parameters
Fitting the Model
fit()
Make Predictions or
Transform Data
predict() and
transform()

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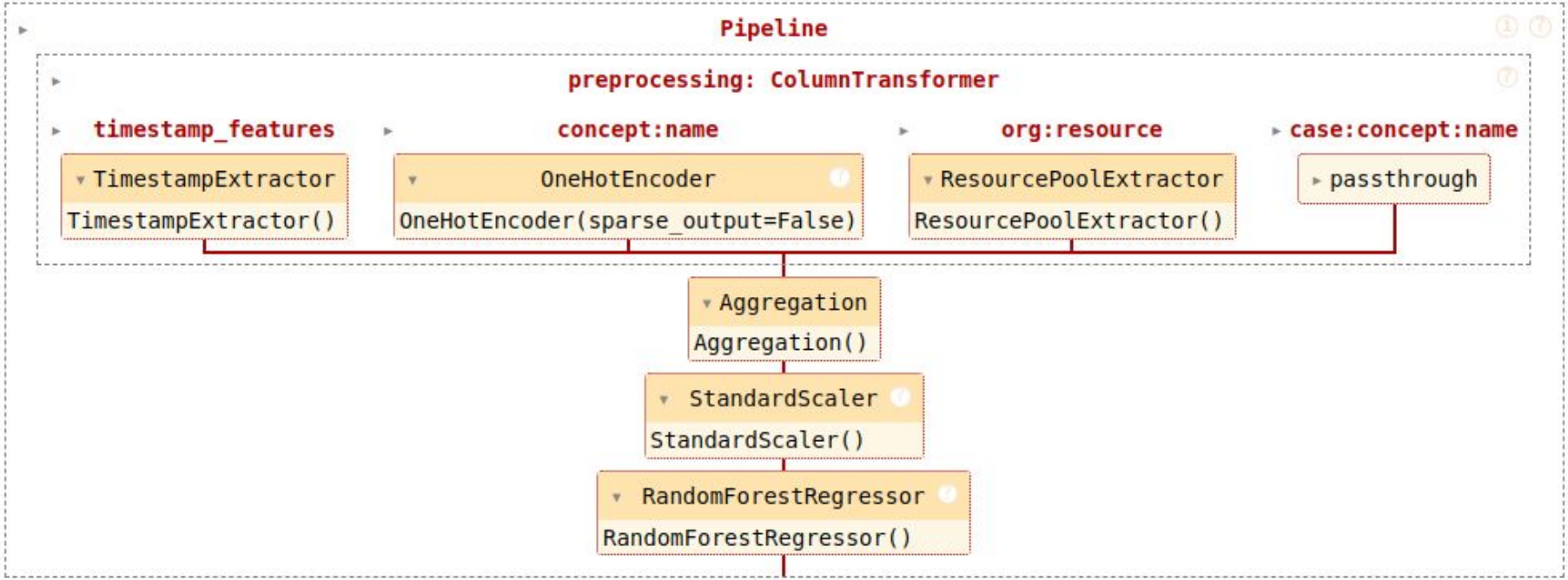
02 SkPM



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03 Practice

Process Mining the Scikit-Learn Way: Introducing SkPM

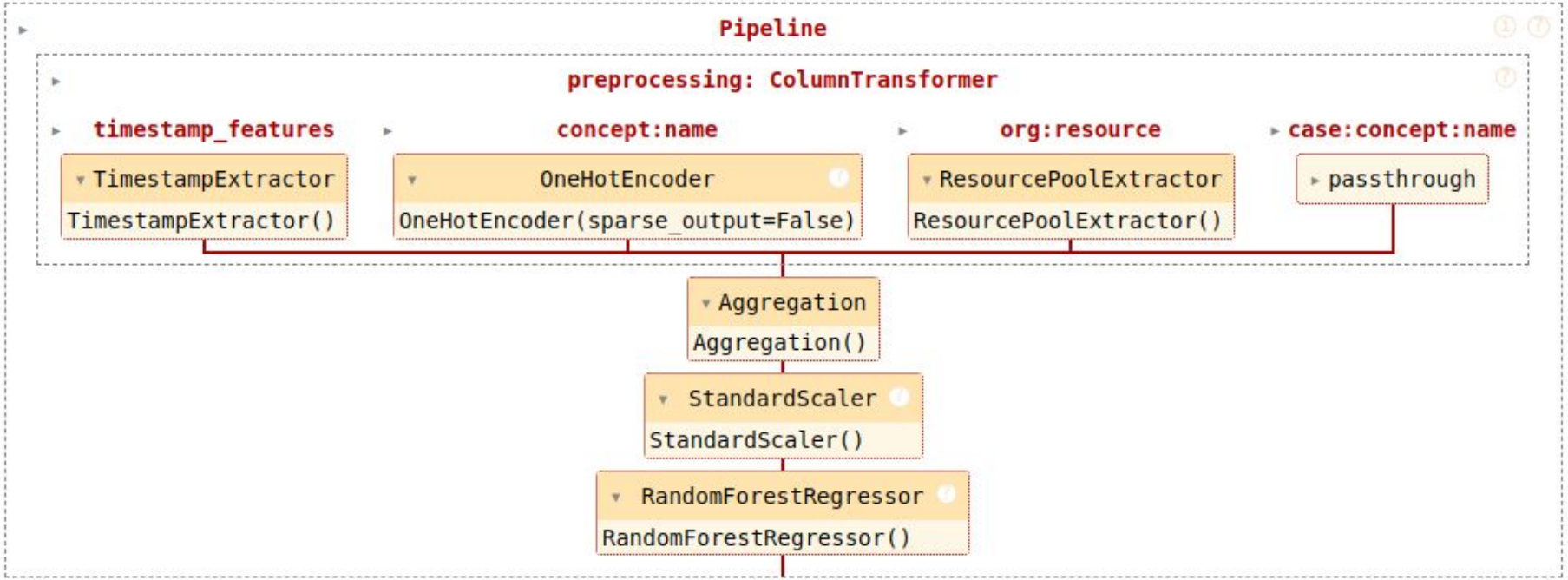
03 Practice!

Process Mining the Scikit-Learn Way: Introducing SkPM

04 Key takeaways

Process Mining the Scikit-Learn Way: Introducing SkPM

03 Practice!



Researcher Opportunity: PORTRAIT Project (Port to Rail Digital Twin in the Adriatic Region)

The PORTRAIT project aims to develop a digital twin for the Adriatic region's port and rail system. This tool will aid domain experts in analyzing future scenarios, optimizing system capacity, and supporting decision-making processes. Key aspects include:

1. **System Data**: Real and synthetic data for system insights.
2. **Process Simulation Models**: using PM!!!

Duration: 24 months (renewable)
Scientific Lead: Sylvio Barbon Junior

ELSEVIER

Engineering Applications of Artificial Intelligence

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Trace encoding in process mining: A survey and benchmarking

Gabriel M. Tavares [a] ✉, Rafael S. Oyamada [b] ✉, Sylvio Barbon Junior [c] ✉, Paolo Ceravolo [b] ✉

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THANK YOU!

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