Project Name	RTDIP Timeseries Forecasting
Online team meeting	https://fau.zoom-x.de/j/65502405196?pwd=8H73lyixQfqKrnO8Eb47kawnuKCnGp.1
Production system (if any)	TBD (Industry Partner Meeting on Monday)
Test system (if any)	TBD (Industry Partner Meeting on Monday)
GitHub repository	https://github.com/amosproj/amos2025ws03-rtdip-timeseries-forecasting
GitHub feature board	https://github.com/orgs/amosproj/projects/91/
GitHub imp-squared backlog	https://github.com/orgs/amosproj/projects/96
Team T-shirt (white)	https://www.shirtinator.de/s/hxP8hSnaRtySUDnzQlWstg
Team T-shirt (black)	https://www.shirtinator.de/s/8r9ZDTMpQdiFofT4Mu9cUw
Additional materials	https://discord.gg/KJXGmjcs
Team maling list	oss-amos-projX@lists.fau.de
Happines Index App	https://happy-amos.appspot.com/Courses

Last Name	First Name	GitHub User Name	Email Address
Böhm	Luca	qw3rat	luca.boehm@fau.de
Meusling	Patrick	SirGankalot	meusling@campus.tu-berlin.de
Arifin	Hafidz	zenzeii	h.arifin@campus.tu-berlin.de
Huy	Christoph	Perimora	christoph.huy@campus.tu-berlin.de
Selbig	Simon	simonselbig	simon.selbig@gmx.de
Haseeb	Abdul	abdulhaseeb-se	abdul.ah.haseeb@fau.de
Pohnke	Hannes	hpfref	hannes.j.pohnke@gmail.com
Jokiel	Rene	BelmontR	rene.jokiel@fau.de
Khabouze	Mehdi	Mehdi-kbz	khabouze@campus.tu-berlin.de

		Product Owner					
#	Meeting Day	Review	Planning	Software Developer	Release Manager	Scrum Master	Comment
1	2025-10-15	Patrick Meusling	Hafidz Arifin	Everyone else	N/A	Luca	
2	2025-10-22	Hafidz Arifin	Patrick Meusling	Everyone else	Christoph	Luca	
3	2025-10-29	Patrick Meusling	Hafidz Arifin	Everyone else	Mehdi Khabouze	Luca	
4	2025-11-05	Hafidz Arifin	Patrick Meusling	Everyone else	Rene Jokiel	Luca	
5	2025-11-12	Patrick Meusling	Hafidz Arifin	Everyone else	Abdul Haseeb	Luca	
6	2025-11-19	Hafidz Arifin	Patrick Meusling	Everyone else	Hannes Pohnke	Luca	
7	2025-11-26	Patrick Meusling	Hafidz Arifin	Everyone else	Simon Selbig	Luca	Mid-term due
8	2025-12-03	Hafidz Arifin	Patrick Meusling	Everyone else	Rene Jokiel	Luca	
9	2025-12-10	Patrick Meusling	Hafidz Arifin	Everyone else	Mehdi Khabouze	Luca	
10	2026-01-11	Hafidz Arifin	Patrick Meusling	Everyone else	Abdul Haseeb	Luca	
11	2026-01-18	Patrick Meusling	Hafidz Arifin	Everyone else	Hannes Pohnke	Luca	
12	2026-01-25	Hafidz Arifin	Patrick Meusling	Everyone else	Simon Selbig	Luca	
13	2026-02-01	Patrick Meusling	Hafidz Arifin	Everyone else	Mehdi Khabouze	Luca	
14	2026-02-08	Hafidz Arifin	Patrick Meusling	Everyone else	Christoph	Luca	Demo day!
15	2026-02-15	Patrick Meusling	Hafidz Arifin	Everyone else	Hannes Pohnke	Luca	Retrospective
Product owners, software developers, and Scurm Master are set and ideally don't change over time; the critical part is the Release Manager role you need to define here							

Goals	Aquire new skills
	Produce a functioning and valuable product (a 1.0)
Meeting norms	We respect the opinions of others and we show up on time
	Summary of Partner Meeting required
Working norms	Clean, testable code with clear commit messages, code comments
	We respect other people's work
Coordination norms	Seperate branches for issues, second person review
	We balance workload among the team
Communication norms	Daily check the corresponding channels (discord)
	We communicate constructively, make sure to communicate possible problems (absence, etc.)
Consideration norms	We discuss issues openly
	We vote in case we can't reach a consensus
Cont. improvement norms	We encourage critique and improvement efforts
	Encourage reaching out for help (use the strength/skills of others)
Rewards	We treat ourselfes to a sweet of choice for good work
Sanctions	Push Ups (amount decided on the case)
Signatures	
Scrum Master	Luca Böhm
Product owner	Patrick Meusling
Product owner	Hafidz Arifin
Software developer	Abdul Haseeb
Software developer	Rene Jokiel
Software developer	Simon Selbig
Software developer	Hannes Pohnke
Software developer	Christoph Huy
Software developer	Mehdi Khabouze

Product Vision	Project Mission
The reason of existence of the envisioned product (beyond this project).	The mission of this particular project (in the context of the product vision).

Term	Definition

Sprint #	Sprint goal
1	None
2	None
3	None
4	Optional
5	Write your sprint goal here
6	
7	
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Sprint #	Story Points Realized
1	
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14	
15	
	PLEASE CREATE THE VELOCITY CHART ON A NEW TAB USING THE DATA FROM THIS TAB

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
Release						
Total			0	0		
Sprints						
1			0	0	0	0
2			0	0	0	0
3			0	0	0	0
...				0		0
Features						
1						
2						
3						
		PLEASE CREATE THE BURNDOWN CHART ON A NEW TAB USING THE DATA FROM THIS TAB				

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
Release						
Total			0	0		
Sprints						
1			0	0	0	0
2			0	0	0	0
3			0	0	0	0
...				0		0
Features						
1						
2						
3						
		PLEASE CREATE THE BURNDOWN CHART ON A NEW TAB USING THE DATA FROM THIS TAB				

#	Feature Definition of Done	Sprint Release Definition of Done	Project Release Definition of Done

Type	Link / reference

Project:	BTP - Forecasting and Anomaly Detection
Version	0.1.0-Sprint3
Date	28.10.2025
Last updated	28.10.2025
Environment	Development
Authors	Christoph Hoy

System Components

Name	Category	Source	Description
Forecasting	ML Component	src/sdk/python/rtdip_sdk/pipelines/forecasting	Train / Prediction with Forecasting Models.
Transformer	ML Pre-Processing	src/sdk/python/rtdip_sdk/pipelines/transformers/spark/machine_learning	Data / Feature pre-processing for ML components.
Data Manipulator	Data Quality	src/sdk/python/rtdip_sdk/pipelines/data_quality/data_manipulation	Alters data to ensure data quality.
Monitor	Data Quality	src/sdk/python/rtdip_sdk/pipelines/data_quality/monitoring	Monitors quality of time-series data.
Source	Data Extraction	src/sdk/python/rtdip_sdk/pipelines/sources	Ingest data source.
Data Storage	Data Storage	external (delta-spark)	Provides raw time-series data for ingestion and processing.

ML Artifacts

Name	Category	Source	Description
Upcoming			
Anomaly Detection	ML Component	TBA	Detects anomalies in time-series predictions.
TBA			

First Level Dependencies and Runtimes

Name	Category	Version	License	Vendor	Description
Python	Runtime	3.9 < 3.12.11	PSF	Python Software Foundation	Core runtime for all SDK and ML components.
OpenJDK	Runtime	11.0.27	GPL v2 + Classpath Exception	OpenJDK Community	Java Virtual Machine required for Apache Spark and Delta Lake.
Apache Spark (PySpark)	Runtime	3.5.5	Apache-2.0	Apache Software Foundation	Distributed compute engine for ETL, data quality and forecasting pipelines.
Delta Lake (delta-spark)	Runtime	3.0.0	Apache-2.0	Linux Foundation / Databricks Open Source	Transactional storage layer enabling ACID and time-travel on Parquet data.
pandas	Library	2.2.3	BSD-3-Clause	PyData / NumFOCUS	Core data-processing library providing DataFrame operations and ETL utilities.
polars	Library	0.20.31	MIT	Polars Contributors	Fast DataFrame engine written in Rust for high-performance data manipulation.
pyarrow	Library	15.0.2	Apache-2.0	Apache Software Foundation	Columnar data access and Parquet I/O layer for Spark and Delta components.
scikit-learn	Library	1.7.2	BSD-3-Clause	Scikit-learn Developers / NumFOCUS	Machine-learning algorithms and preprocessing utilities for forecasting and modeling.
statsmodels	Library	0.14.5	BSD-3-Clause	Statsmodels Developers	Statistical modeling and time-series forecasting framework (e.g. SARIMA).
pmdarima	Library	2.0.4	MIT	Alkha Management Group	Automated ARIMA model selection and time-series forecasting.
delta-spark	Library	3.0.0	Apache-2.0	Linux Foundation / Databricks	Delta Lake Python API for ACID table management and versioned data.
databricks-sql-connector	Library	3.7.1	Apache-2.0	Databricks Inc.	JDBC-style SQL connector for querying Delta and Databricks tables.
fastapi	Library	0.119.0	MIT	Sebastian Ramirez	High-performance web framework for building REST APIs and model endpoints.
uvicorn	Library	0.37.0	BSD-3-Clause	Encode OSS	ASGI server providing runtime execution for FastAPI endpoints.
azure-core / azure-identity / azure-storage-blob	Library	1.35+	MIT	Microsoft Azure SDK	Core, authentication and blob-storage SDKs for Azure integration.
pytest / pytest-cov	Library	7.4 / 4.1	MIT	Pytest Community	Unit and integration testing framework with coverage support.
black / isort / pylint	Library	25.1 / 5.13 / 2.17	MIT / BSD-3	Python Software Foundation / PyCQA	Code formatting and linting for CI quality assurance.
mkdocs / mkdocs-material / mkdocstrings	Library	1.6 / 9.5 / 0.25	MIT	MkDocs Community	Documentation generation system for SDK and forecasting components.

Tools

Name	Category	Version	Description
git	Development / Publish	2.43.0	Distributed version control system used for source code management and collaborative development.
VS Code	Development	1.105.1	Integrated development environment used for coding, debugging, documentation editing, and Git integration.
Conda	Development / Build	25.5.1	Environment and package management system ensuring reproducible builds and dependency control.

Last Name	First Name	Value		#DIV/0!	#DIV/0!		
Böhm	Luca						
Meusling	Patrick						
Arifin	Hafidz						
Huy	Christoph						
Selbig	Simon			0	No size		
Haseeb	Abdul			1	Trivial size		
Pohnke	Hannes			2	Small size		
Jokiel	Rene			3	Medium size		
Khabouze	Mehdi			5	Large size		
				8	Very large size		
				13	Too large (size)		
How to play planning poker							
1. Everyone type their number into their value field, don't hit return yet							
2. Someone, perhaps a product owner, count down 3.. 2.. 1..							
3. Then, everyone hit return to submit their value							