ODELIA

Deliverable D4.2

SOURCE CODE FOR THE WEB FRONT-END

Lead beneficiary	SAI
Author(s)	David Friedrich – Product Management Bulat Maksudov – Architecture, development, testing, user training
Reviewer(s)	Alice Dudle (UZH)
Dissemination level	PU
Type	DEC
Delivery date	June 30, 2025

**Funded by
the European Union**

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EXECUTIVE SUMMARY

The ODELIA project aims to develop a user-friendly front-end interface for efficient data collection and AI model testing in clinical workflows. Deliverable 4.2 provides the source code as an open-source package to encourage widespread adoption across academia and industry. The ODELIA viewer, introduced alongside Deliverable 4.1, offers functionalities such as manual annotations for AI model development, submission of MRI studies for automated breast cancer diagnosis, and visualization of AI-generated results.

INTRODUCTION

The overall objective of WP4 of the ODELIA project is to develop a user-friendly front-end interface that facilitates both the efficient collection of data for new AI model development and the testing of these models in clinical workflows. The main goal of Deliverable 4.2 within WP4 is to provide the source code as open source—a core paradigm of the ODELIA project—to foster widespread dissemination and maximize acceptance in both academic and industry sectors.

In parallel with the Deliverable of this report, we have published Deliverable 4.1 *"Web front-end with basic functionalities"* in the [Achievements section](#) of the ODELIA consortium website. As of June 30, 2025, this viewer provides the consortium members with a web front-end with basic functionalities:

- Collect manual annotations to support the development of new AI models,
- submit MRI studies for AI-based automated breast cancer diagnosis,
- display AI-generated diagnostic results,
- offer the radiologist insights into the model's reasoning (e.g., attention heatmaps), if such outputs are generated by the AI model.

The report of Deliverable 4.1 describes the requirements, design choices, workflows and core functionalities of the Viewer as of June 30, 2025.

This report is organized as follows. Section 1 outlines the design choices we have taken to facilitate easy deployment of the viewer. Section 2 contains the link to the Open Source repository, and Section 3 contains the instructions for installing the viewer.

SECTION 1: DESIGN CHOICES

Our package consists of an ODELIA viewer server component optimized for Linux. Once the server is operating, the user can connect to this server via any compatible web browser from any operating system.

To provide a comprehensive and user-friendly deployment guide, we opted to follow the best practices of the open-source community. Docker containers are used to provide a pre-built version of the server component and initial set of configuration files. Those configurations are selected based on reasonable use-cases, while still allowing for further on-site customization if needed. The instructions themselves, together with docker-compose file, are provided via an open GitHub repository to promote visibility and ease of access to the project.

SECTION 2: SOURCE CODE

The source code of the ODELIA Viewer server component is published via GitHub, a web-based platform used primarily for version control and collaborative software development. The public repository is available at https://github.com/StratifAI-Research/odelia-viewer. As this repository is public, a GitHub account is not required to access the source code.

SECTION 3: INSTALLING THE ODELIA VIEWER SERVER COMPONENT

The instructions for deploying the ODELIA viewer server component and supporting infrastructure are available as README file located at https://github.com/StratifAI-Research/odelia-deployment in the main branch of the repository. This repository provides instructions to run pre-built Docker image from https://hub.docker.com/r/stratifai/odelia-viewer and a set of configurations files for users. We aim to enhance and build on top of them, as we enhance the viewer with functionality and acquire consortium members feedback on it.

To install the ODELIA viewer, the user needs to perform the following steps:

1. Clone the repository:

```
git clone --recurse-submodules  https://github.com/StratifAI-Research/odelia-deployment
cd odelia-deployment
```

2. Make sure you have Docker installed on your computer (Docker: Accelerated Container Application Development).

3. Open a terminal in the project directory

4. Run the following command:

```
docker-compose up -d
```

5. Open your web browser and navigate to http://localhost:80

CONCLUSION

StratifAI has successfully delivered a customized MRI viewer as open source, enabling consortium partners and the general public to test AI models directly through the tool. This achievement represents a major milestone in facilitating the transition of Swarm Learning AI models developed within the ODELIA project.

Looking ahead, the next key priority is to expand the viewer's functionalities — for example by adding a structured feedback system that will allow radiologists to evaluate AI model performance. The source code will be updated on the public repository at regular intervals to ensure that the latest improvements are rapidly integrated into practice.