

MODEVAR 2026



UVL and UVLHUB: enhancements and new applications

**ESTHER ROCÍO VALLADOLID ORTÍZ,
DAVID ROMERO ORGANVÍDEZ**



WHO AM I?



ESTHER ROCÍO VALLADOLID ORTÍZ

estvalort@alum.us.es

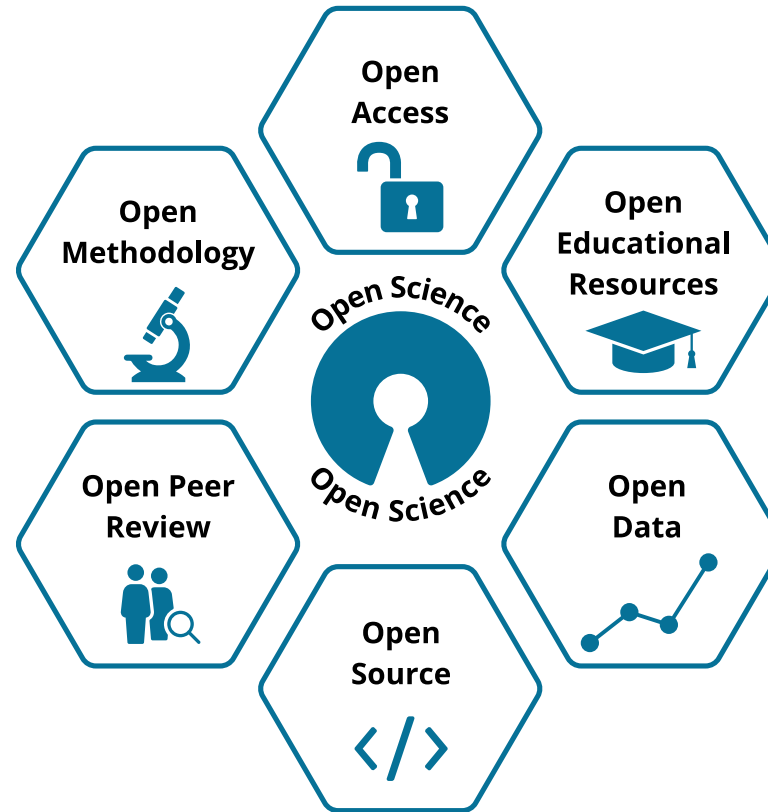
- Software engineering student (last year)
- University of Seville (Spain)
- Next steps:
 - Master in software engineering
 - PhD in variability models

- **What is UVLHub?**
- The problem
- Motivation
- Architecture
- Enhancements

WHAT IS UVLHUB?



**Repository of feature
models in UVL format**



Open Science



Centralization

- What is UVLHub?
- **The problem**
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THE PROBLEM



Feature models are scattered

UVL are not in a common repository



Tooling is fragmented

We need to connect models, tools, and results



Reproducibility is hard

Experiments and analyses cannot easily be reproduced without data sharing

- What is UVLHub?
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MOTIVATION: WHY A REPOSITORY?



Centralize

One place for all UVL feature models from the research community



Discover

Search and filter models by domain, size, features, or metadata



Validate & Analyse

Integrate SPL tools (Flamapy) directly on uploaded models



Cite with DOI

Zenodo integration gives each dataset a permanent, citable DOI

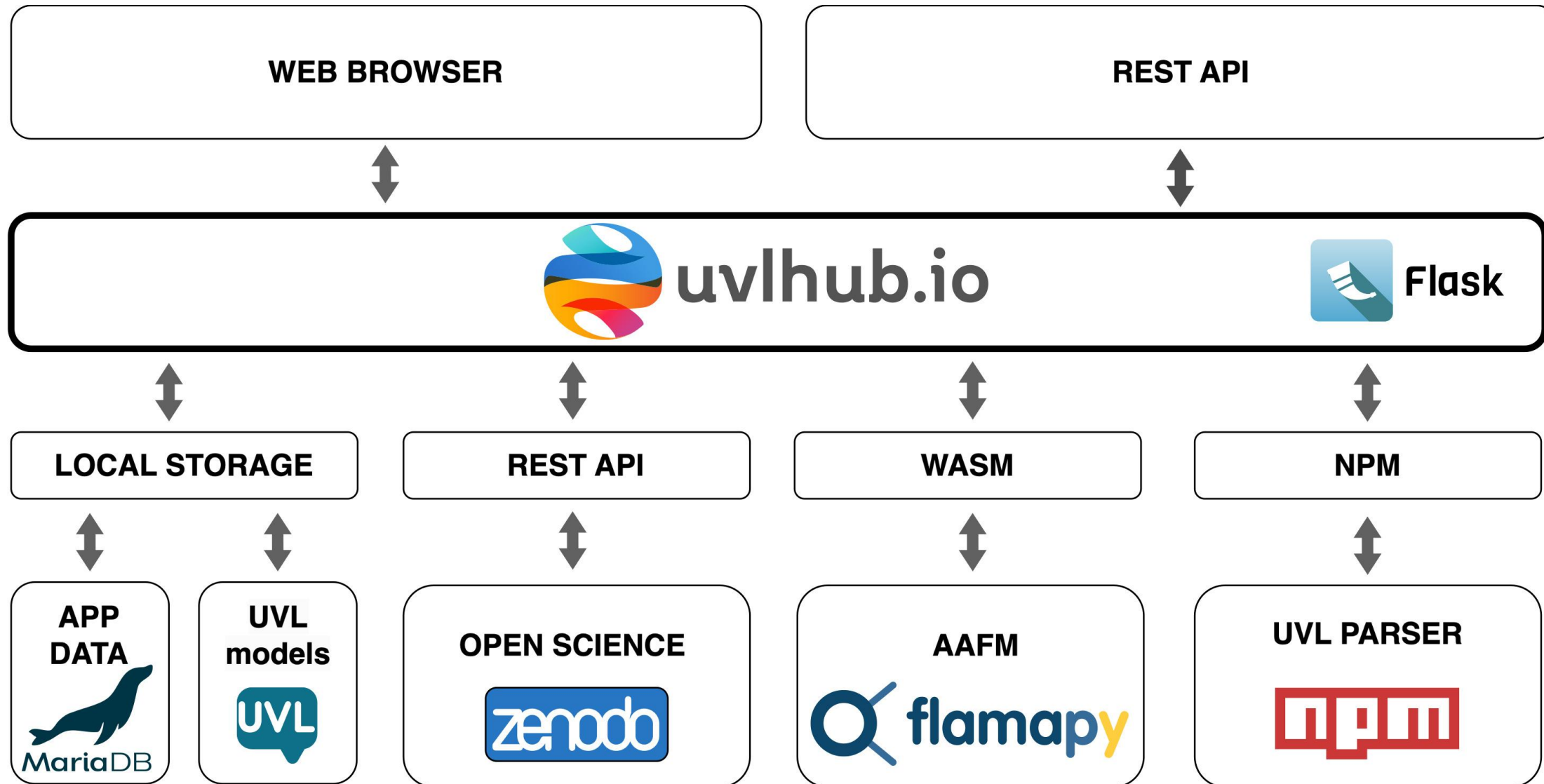


Open Access

Community-driven, open-source platform aligned with Open Science principles

- What is UVLHub?
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- **Architecture**
- Enhancements

ARCHITECTURE



- What is UVLHub?
- The problem
- Motivation
- Architecture
- **Enhancements**

V2.4.0 EDIT DATASET METADATA

As a user, I want to be able to edit the metadata of a dataset.

V2.4.0 EDIT DATASET METADATA

The screenshot displays the uvhub.io V2.4.0 web interface. On the left is a dark blue sidebar with navigation links: Explore, Dashboard, Team, Generate models, DATASETS (Upload dataset, My datasets), DEVELOPER (Read the API docs, API keys, Generate API key), and ACCOUNT (Edit profile, Logout). The main content area is titled 'Top datasets with the most feature models' and lists three sample datasets. Each dataset card includes a title, timestamp, author/affiliation, description, tags, view/download buttons, and a DOI link. A 'Data Management Plan' button is also present for each dataset. On the right, a 'Hub statistics' section shows counts for Datasets (13), Models (896), Dataset views (278), Model views (266), Dataset downloads (95), and Model downloads (1826). Below this is a 'What is uvhub.io?' section explaining its integration with Zenodo and flamapy, and a 'Can I contribute?' section encouraging users to fork the GitHub repository and send pull requests.

uvlhub.io

Mode Cite us! Download all EV

Top datasets with the most feature models

Sample dataset 1 Data Management Plan

September 16, 2025 at 03:36 PM

Author 1 Affiliation 1 ID

Description for dataset 1

tag1 tag2

View Download (1.21 KB)

DOI /doi/10.1234/dataset1

Hub statistics

13 Datasets	896 Models	278 Dataset views
266 Model views	95 Dataset downloads	1826 Model downloads

View full dashboard

Sample dataset 2 Data Management Plan

September 16, 2025 at 03:36 PM

Author 2 Affiliation 2 ID

Description for dataset 2

tag1 tag2

View Download (1.21 KB)

DOI /doi/10.1234/dataset2

Sample dataset 3 Data Management Plan

What is uvlhub.io?

uvlhub.io is a repository of feature models in UVL format integrated with Zenodo and flamapy, developed by DiversoLab.

Can I contribute?

Sure! You can fork our official GitHub repository, create fantastic features, and then send us a pull request.

V2.4.5 FLAMAPY IDE INTEGRATION

As a user, I want to analyse feature models from UVLHub using FlamapyIDE to perform automated analysis operations.

V2.4.5 FLAMAPY IDE INTEGRATION

The screenshot displays the uvlhub.io web application interface. On the left is a dark sidebar with navigation options: Explore, Dashboard, Team, Generate models, DATASETS (Upload dataset, My datasets), DEVELOPER (Read the API docs, API keys, Generate API key), and ACCOUNT (Edit profile, Logout). The main content area is titled 'Top datasets with the most feature models' and lists three sample datasets. Each dataset entry includes a title, timestamp, author, affiliation, description, tags, and download/view links. A 'Data Management Plan' link is also present for each dataset. On the right, a 'Hub statistics' section shows metrics for Datasets (14), Models (897), Dataset views (278), Model views (266), Dataset downloads (95), and Model downloads (1826). Below this is a 'What is uvlhub.io?' section explaining the platform's purpose and a 'Can I contribute?' section encouraging users to fork the GitHub repository.

uvlhub.io

Explore
Dashboard
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My datasets

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Sample dataset 2 Data Management Plan

September 16, 2025 at 03:36 PM
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Description for dataset 2
tag1 tag2

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V2.5.0 DASHBOARD

As a user, I want to be able to see all the statistics in one place.

V2.5.0 DASHBOARD

The dashboard features a dark blue sidebar on the left with the following navigation options: Explore, Dashboard, Team, Generate models, DATASETS (Upload dataset, My datasets), DEVELOPER (Read the API docs, API keys, Generate API key), and ACCOUNT (Edit profile). The main content area is titled "Top datasets with the most feature models" and displays two dataset cards. The first card, "Complete SPLOT dataset (more than 1000 models)", includes a list of contributors (Romero-Organvitez, David; José A. Galindo; Chico Sundermann; Jose-Miguel Horcas; David Benavides) and a description of the dataset's origin. The second card, "CDL", lists contributors (Chico Sundermann; Kevin Feichtinger; Dominik Engelhardt; Rick Rabiser). To the right, a "Hub statistics" section shows 42 Datasets, 1614 Models, and 12 783 Dataset views, along with 51903 Model views, 5521 Dataset downloads, and 97 019 Model downloads. A "What is uvlhub.io?" section explains the repository's integration with Zenodo and flamapy. A "Can I contribute?" section encourages users to fork the GitHub repository and submit pull requests. The top right of the dashboard includes links for Mode, Cite us!, Download all, and EV. A video player is visible at the bottom left of the screen.

uvlhub.io

Mode Cite us! Download all EV

Top datasets with the most feature models

Complete SPLOT dataset (more than 1000 models)

Conference Paper

July 25, 2023 at 10:30 AM

Romero-Organvitez, David University of Seville

José A. Galindo University of Seville

Chico Sundermann University of Ulm

Jose-Miguel Horcas University of Malaga

David Benavides University of Seville

Dataset of models extracted from SPLOT (<http://www.splot-research.org/>) and recovered to UVL format. Extraction date: 24 July 2023

splot dataset

View Download (1.26 MB)

DOI [/doi/10.5281/zenodo.12697473](https://doi.org/10.5281/zenodo.12697473)

CDL

Conference Paper

July 25, 2023 at 10:20 AM

Chico Sundermann University of Ulm

Kevin Feichtinger Johannes Kepler University Linz

Dominik Engelhardt TU Braunschweig

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0:00

Translated from FeatureIDE.xml, original publication in <https://doi.org/10.1145/3106237.3106252>

V2.7.0 MODEL GENERATOR

As a user, I want to be able to generate valid UVL feature models directly in my browser using a local LLM.

V2.7.0 MODEL GENERATOR

The screenshot displays the uvlhub.io website interface. On the left is a dark sidebar with navigation links: Explore, Dashboard, Team, Generate models, DATASETS (Upload dataset, My datasets), DEVELOPER (Read the API docs, API keys, Generate API key), and ACCOUNT (Edit profile). The main content area features a search bar and a 'Top datasets with the most feature models' section. The first dataset, 'Complete SPLOT dataset (more than 1000 models)', is highlighted with a 'Conference Paper' tag. It lists contributors: Romero-Organvitez, David (University of Seville), José A. Galindo (University of Seville), Chico Sundermann (University of Ulm), Jose-Miguel Horcas (University of Malaga), and David Benavides (University of Seville). The dataset description states it was extracted from SPLOT (http://www.splot-research.org/) and recovered to UVL format on July 24, 2023. It includes a 'splot dataset' tag, 'View' and 'Download (1.26 MB)' buttons, and a DOI link: /doi/10.5281/zenodo.12697473. Below this, the 'CDL' dataset is partially visible, listing contributors: Chico Sundermann (University of Ulm), Kevin Feichtinger (Johannes Kepler University Linz), Dominik Engelhardt (TU Braunschweig), and Rick Rabiser (Johannes Kepler University Linz). To the right, the 'Hub statistics' section shows: 42 Datasets, 1614 Models, 12783 Dataset views, 51904 Model views, 5521 Dataset downloads, and 97019 Model downloads. A 'View full dashboard' link is present. At the bottom right, a 'What is uvlhub.io?' section explains it as a repository of feature models in UVL format integrated with Zenodo and flamapy, developed by DiversoLab. Below that, a 'Can I contribute?' section encourages forking the GitHub repository and sending pull requests. A video player is visible at the bottom left of the screenshot.

uvlhub.io

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Complete SPLOT dataset (more than 1000 models) Conference Paper

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splot dataset

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Rick Rabiser Johannes Kepler University Linz

translated from FeatureIDE.xml, original publication in <https://doi.org/10.1145/3106237.3106252>

FUTURE ENHANCEMENTS

- Edit datasets' UVL files: currently working on ✓
- Any suggestions?

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DIVERSO LAB
INTERNATIONAL COMPUTING

