Zorya

Web Platform for data lakes and exploration of artificial intelligence for Digital Pathology

M3: Presentation of initial operational capability

Projeto em Informática 24/25

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CONTEXT

Digital Pathology Platform for Doctors/Researchers

Upload and Visualization of DICOM Images

Extraction of Metadata

Automatic Work Distribution

Automated AI-assisted Annotations

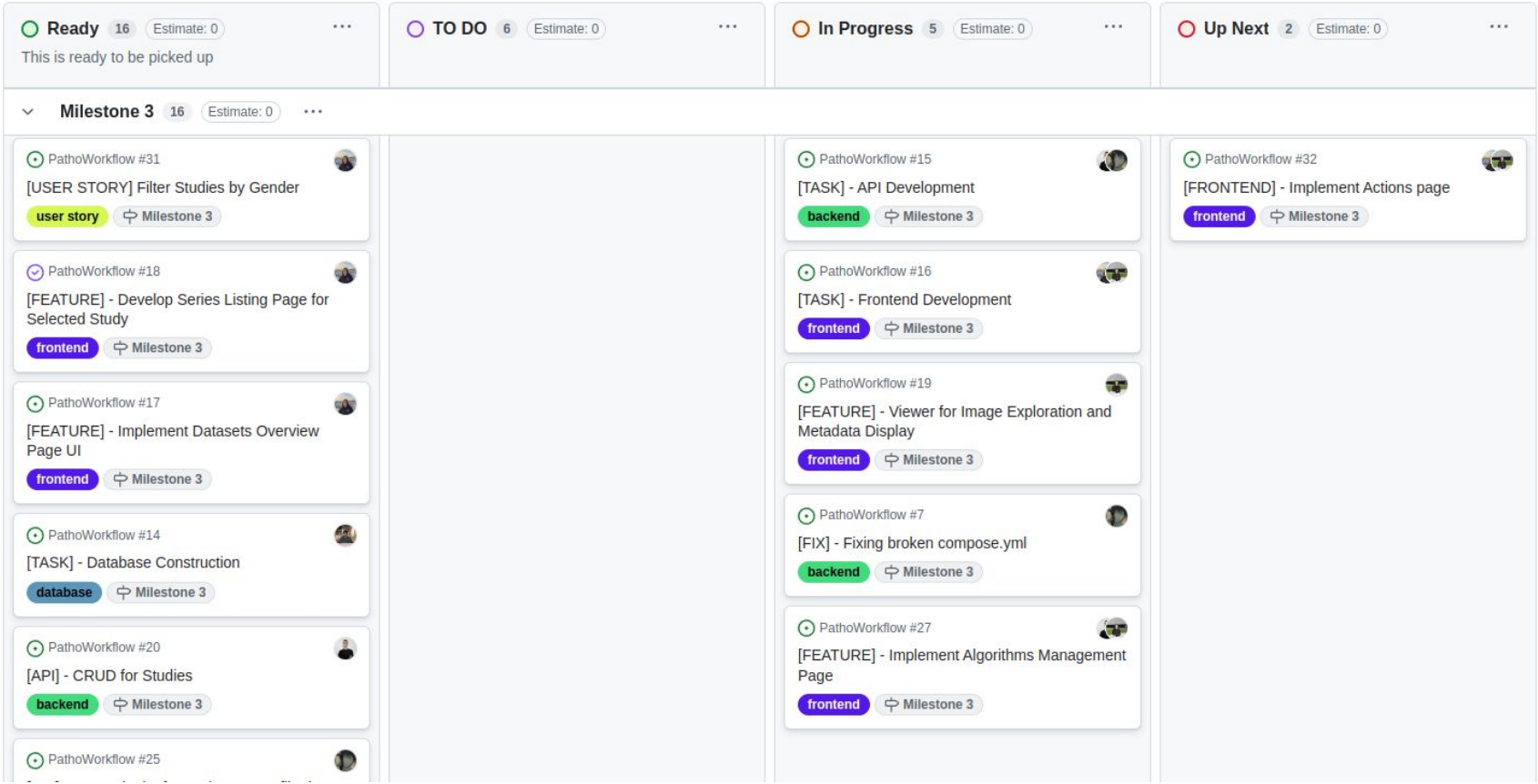
CALENDAR

Construction	Database Construction		- Models Implementation		11/03/2025	19/03/2025	Henrique	Done
Construction	Website Skeleton Development		- Create base projects - Define website structure	Frontend Database Backend	11/03/2025	15/03/2025	Diogo	Done
Construction	API Development		- Setup - Endpoints - Testing - Documentation (already built in FastAPI)	Backend Frontend Testing	14/03/2025	30/03/2025	João Diogo	In progress
Construction	Frontend Development		- Setup - Develop UI - Integrate with API	Frontend	16/03/2025	30/03/2025	Raquel Carolina	In progress
Construction	✅ CheckPoint				25/03/2025	25/03/2025	Everyone	Done
Construction	🎯 Milestone 3	Presentation of initial operational capability		Presentation	08/04/2025	08/04/2025	Everyone	In progress

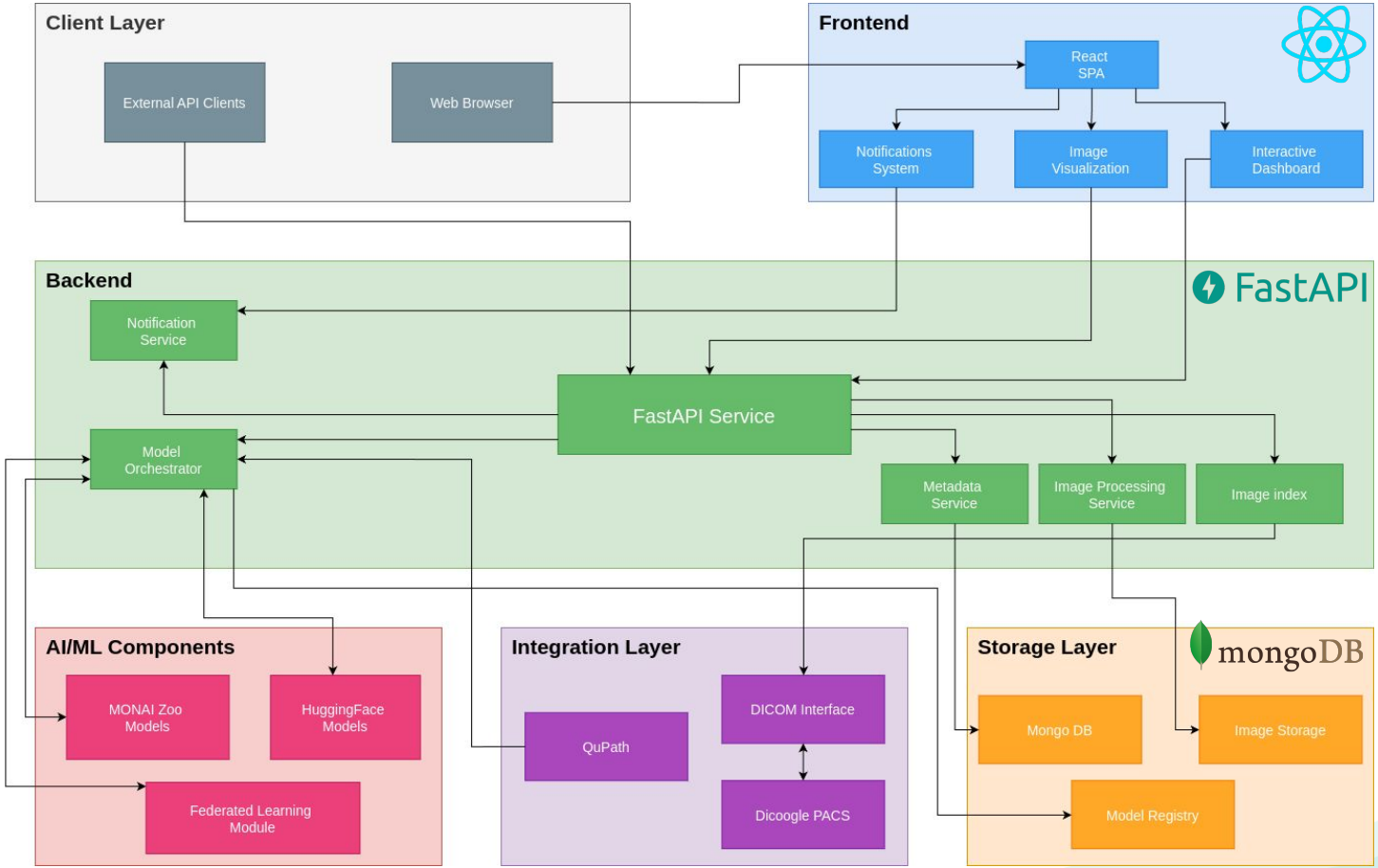
CALENDAR CHANGES

Construction	Database Construction		- Models Implementation		11/03/2025	19/03/2025	Henrique	Done
Construction	Website Skeleton Development		- Create base projects - Define website structure	Frontend Database Backend	11/03/2025	15/03/2025	Diogo	Done
Construction	API Development	- Studies	- Setup - Endpoints	Backend Frontend Testing	14/03/2025	30/03/2025	João Diogo	Done
Construction	Frontend Development	Pages: - Studies - Viewer - Algorithms	- Setup - Develop UI	Frontend	16/03/2025	30/03/2025	Raquel Carolina	Done
Construction	Tools Integration	- Dicoogle - Cornerstone		Backend Frontend Database	25/02/2025	01/04/2025	João Diogo	Done
Construction	✅ CheckPoint				25/03/2025	25/03/2025	Everyone	Done
Construction	Studies Endpoint Consumption			Frontend	29/03/2025	31/03/2025	João	Done
Construction	Presentation Planning			Presentation	01/04/2025	07/04/2025	Everyone	Done
Construction	🎯 Milestone 3	Presentation of initial operational capability		Presentation	08/04/2025	08/04/2025	Everyone	In progress

BACKLOG


Ready 16 Estimate: 0
This is ready to be picked up
TO DO 6 Estimate: 0
In Progress 5 Estimate: 0
Up Next 2 Estimate: 0
Milestone 3 16 Estimate: 0
PathoWorkflow #31
[USER STORY] Filter Studies by Gender
user story
Milestone 3
PathoWorkflow #18
[FEATURE] - Develop Series Listing Page for Selected Study
frontend
Milestone 3
PathoWorkflow #17
[FEATURE] - Implement Datasets Overview Page UI
frontend
Milestone 3
PathoWorkflow #14
[TASK] - Database Construction
database
Milestone 3
PathoWorkflow #20
[API] - CRUD for Studies
backend
Milestone 3
PathoWorkflow #25
PathoWorkflow #15
[TASK] - API Development
backend
Milestone 3
PathoWorkflow #16
[TASK] - Frontend Development
frontend
Milestone 3
PathoWorkflow #19
[FEATURE] - Viewer for Image Exploration and Metadata Display
frontend
Milestone 3
PathoWorkflow #7
[FIX] - Fixing broken compose.yml
backend
Milestone 3
PathoWorkflow #27
[FEATURE] - Implement Algorithms Management Page
frontend
Milestone 3
PathoWorkflow #32
[FRONTEND] - Implement Actions page
frontend
Milestone 3

SYSTEM ARCHITECTURE



WHAT ARE WE DOING?

Frontend:

- Implementing viewer
- Implementing Algorithms page
- Defining and starting to implement Actions page
- Studies page improvements

Backend:

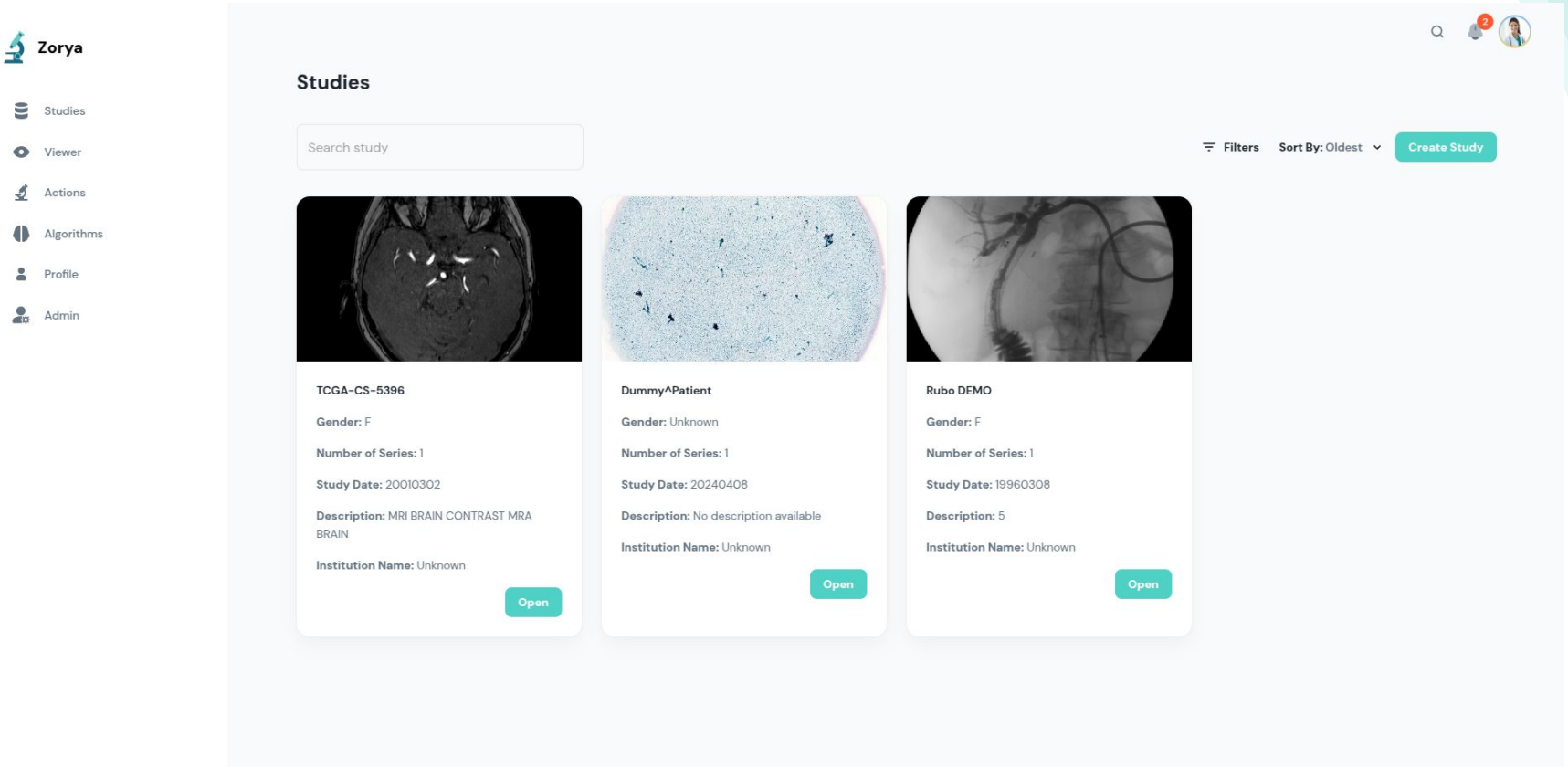
- Implementation of Dicoogle API

DATABASE CHANGES

DATASETS -> STUDIES -> IMAGES

STUDIES -> SERIES -> IMAGES

DEMO


Zorya
Studies
Viewer
Actions
Algorithms
Profile
Admin
Studies
Search study
Filters
Sort By: Oldest
Create Study
TCGA-CS-5396
Gender: F
Number of Series: 1
Study Date: 20010302
Description: MRI BRAIN CONTRAST MRA BRAIN
Institution Name: Unknown
Open
Dummy^Patient
Gender: Unknown
Number of Series: 1
Study Date: 20240408
Description: No description available
Institution Name: Unknown
Open
Rubo DEMO
Gender: F
Number of Series: 1
Study Date: 19960308
Description: 5
Institution Name: Unknown
Open

NEXT STEPS

Resolve viewer implementation issues

Implement Actions page

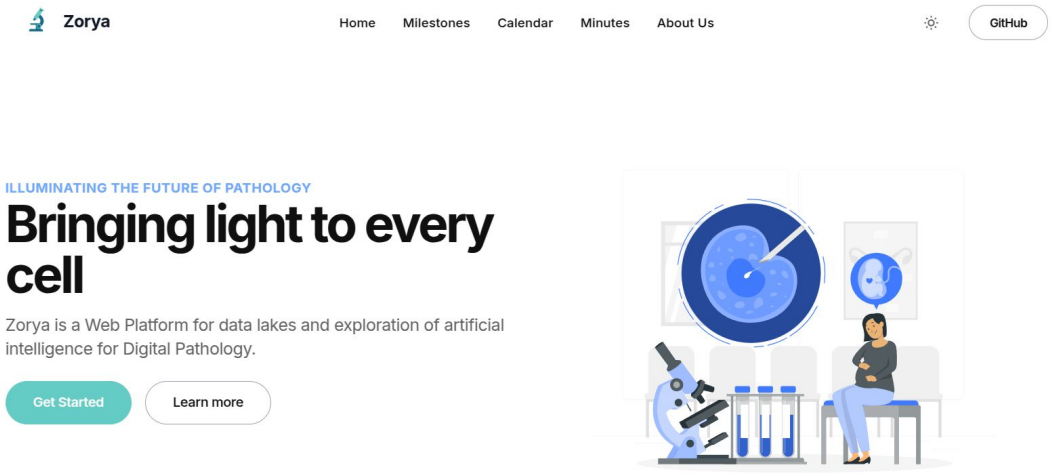
Finalize Algorithms page

Integration of QuPath and GrandQC

Implementation of a Dicoogle Plugin to:

- **Automate Indexing**
- **Extract metadata**
- **Use models.**

Documentation Website



https://zorya-docs.github.io/

Thanks!