

AI Summer School

September 8-12, 2025



VLM-Inspector

Early detection, smarter decisions
on rare events that matter

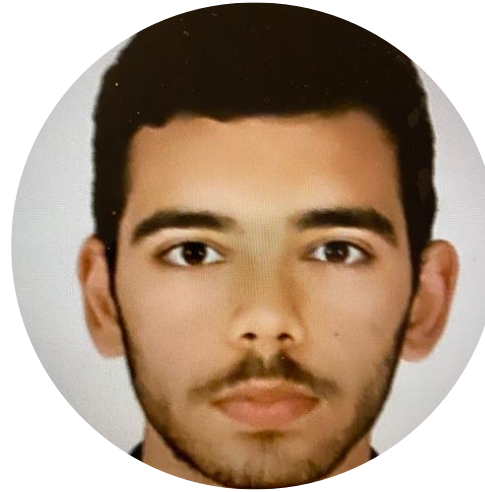
Team RareAI



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Sadeq
Darrab

Rare events challenge

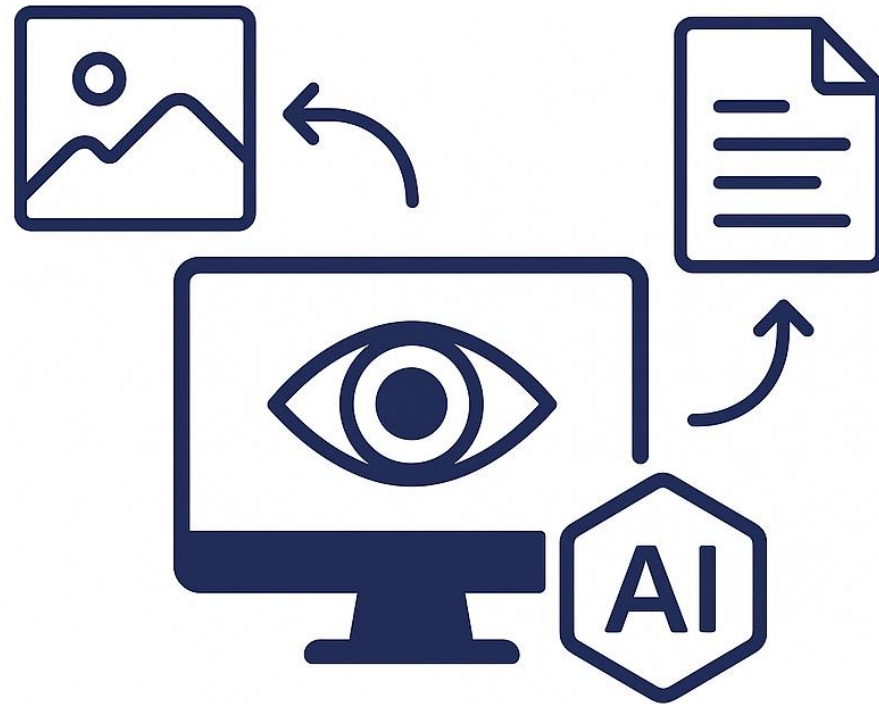
Critical rare events face the challenge of *data scarcity*, which in the context of AI makes it difficult to train accurate models

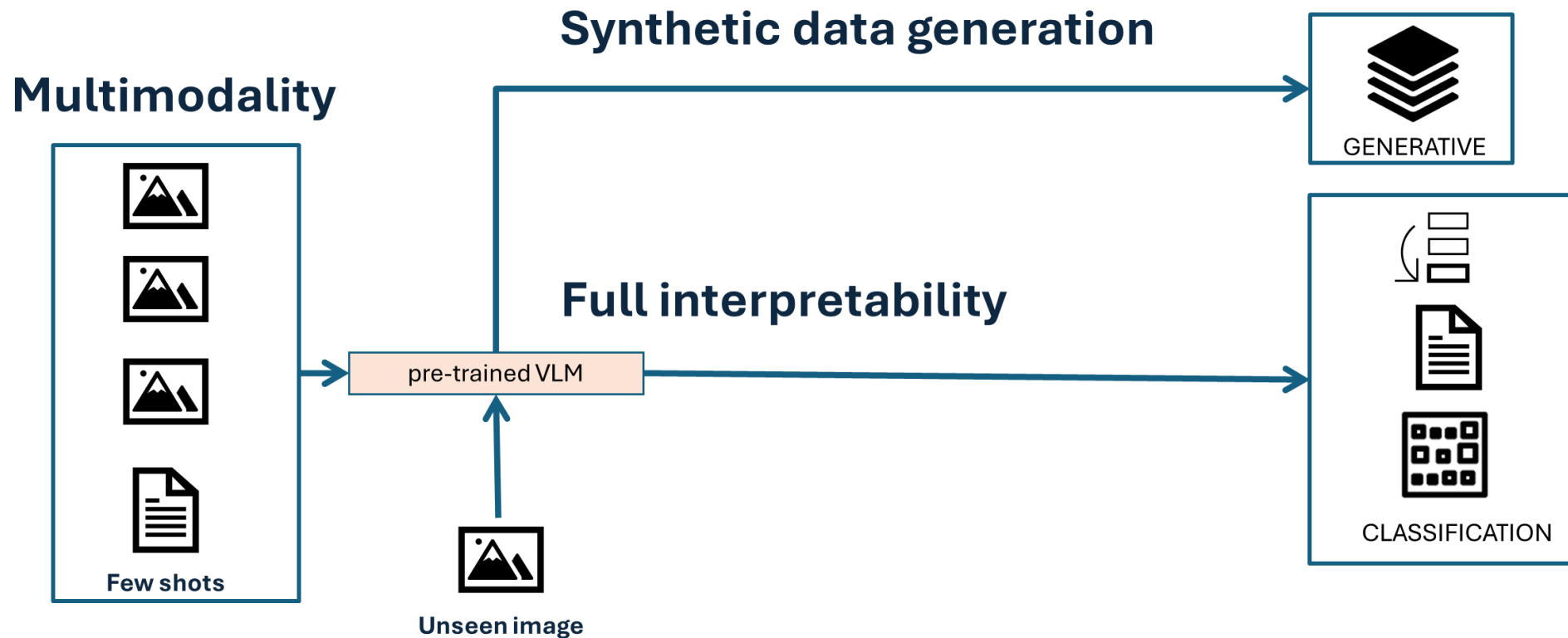


Proposed idea



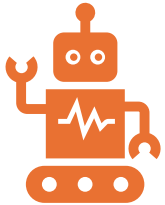
**Leveraging
Multimodal Foundation
models and Generative AI**





From scarce data to robust, explainable rare-event detection

Ethical & Inclusive AI Design



Responsible AI

Controlled generation of synthetic images for data augmentation, ensuring privacy and licensing compliance.

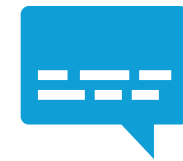
Built-in explainability: output includes class, textual reasoning, and heatmap.



Bias Mitigation

Ensure **balanced** data within each domain

Validate on diverse samples



Inclusive Design

Simple interface for **non-technical** domain experts.

Clear multimodal output: explanatory text, image, and defect heatmap.



**VLM-
INSPECTOR**
CROP HEALTH



**VLM-
INSPECTOR**
TROPICAL MEDICINE



**VLM-
INSPECTOR**
MANUFACTURING

Business Model



Value Proposition

Versatile AI tool for early detection of rare events in images, with natural-language explanations.



Adapts quickly to any dataset with few samples. Supports health, agriculture, and manufacturing and all rare critical events management.



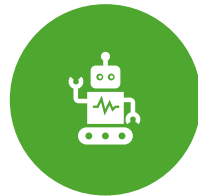
Customers & Channels

Hospitals, NGOs, farmers, manufacturers. Delivered via SaaS, APIs, or partnerships.



Revenue

Subscriptions, API usage, customization services, grants for social-impact projects.



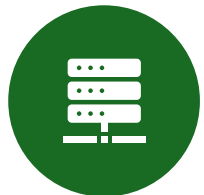
Key Activities & Resources

Model fine-tuning, synthetic data generation, UX design, domain experts, cloud infrastructure.



Partners (scalable)

Hospitals, agritech groups, industrial firms, research labs.



Costs

Cloud computing, development, dataset curation, support & training.