

CV Lab Project, Lab 2: Intermediate Results



Group A0:

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First approach

Autoencoder → Bad reproduction of RGB images

→ Good reproduction of Anomaly images (Binary images)



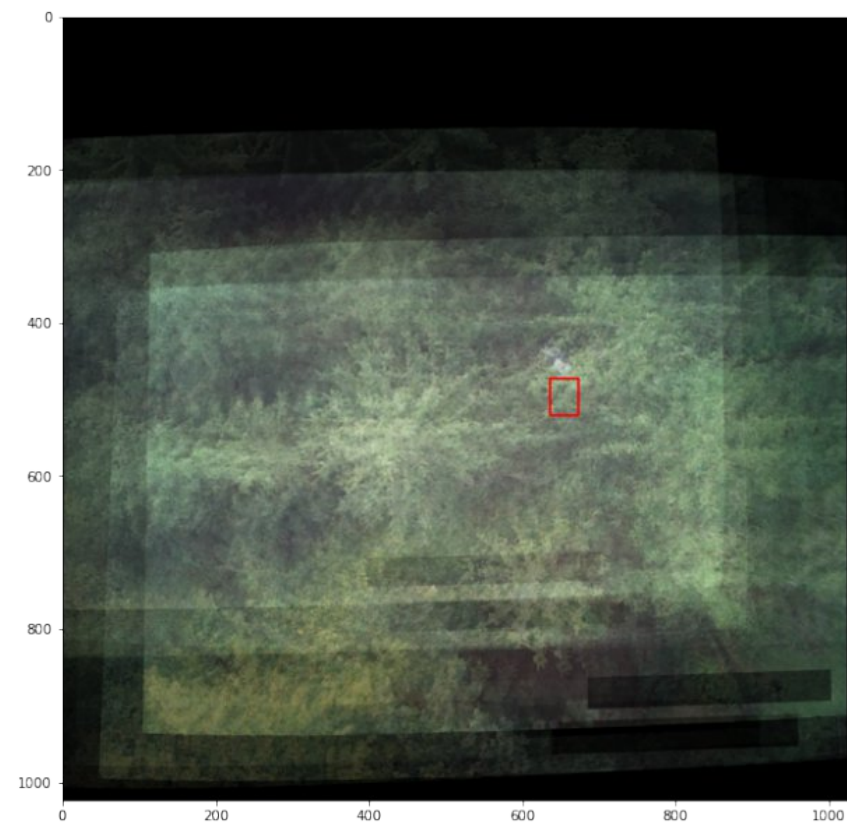
Problems extracting more info

Modified mahalanobis RX detector

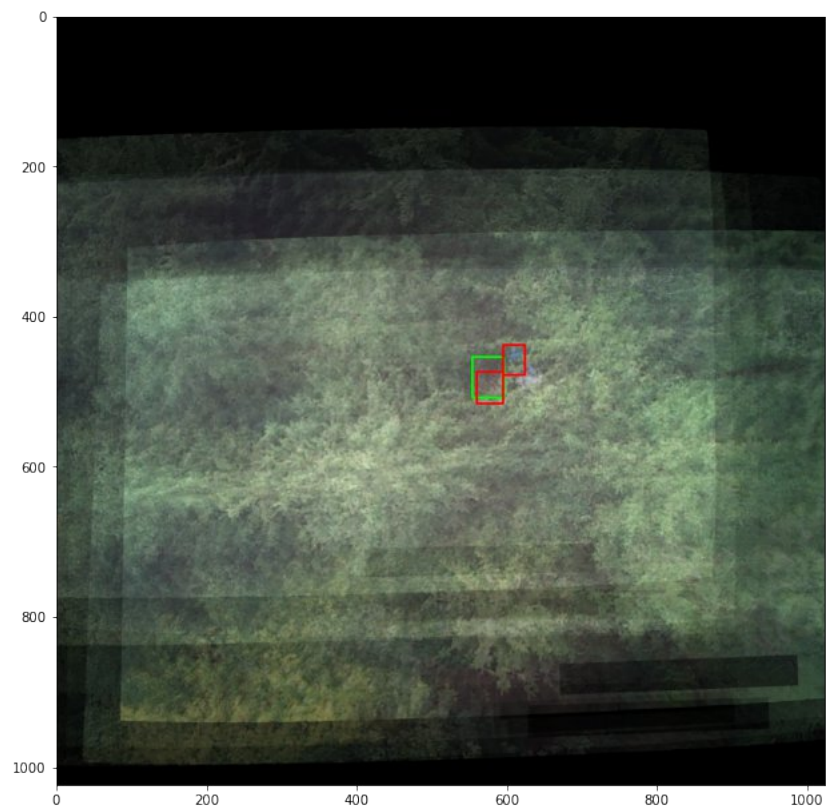
Overview of results

- Average precision: 43.33%
- Execution time*: ~1sec
[* image merging time excluded]
- No learning included
- Detection of most of the static objects are excluded
- Problems detecting people with slight movement respect to the background

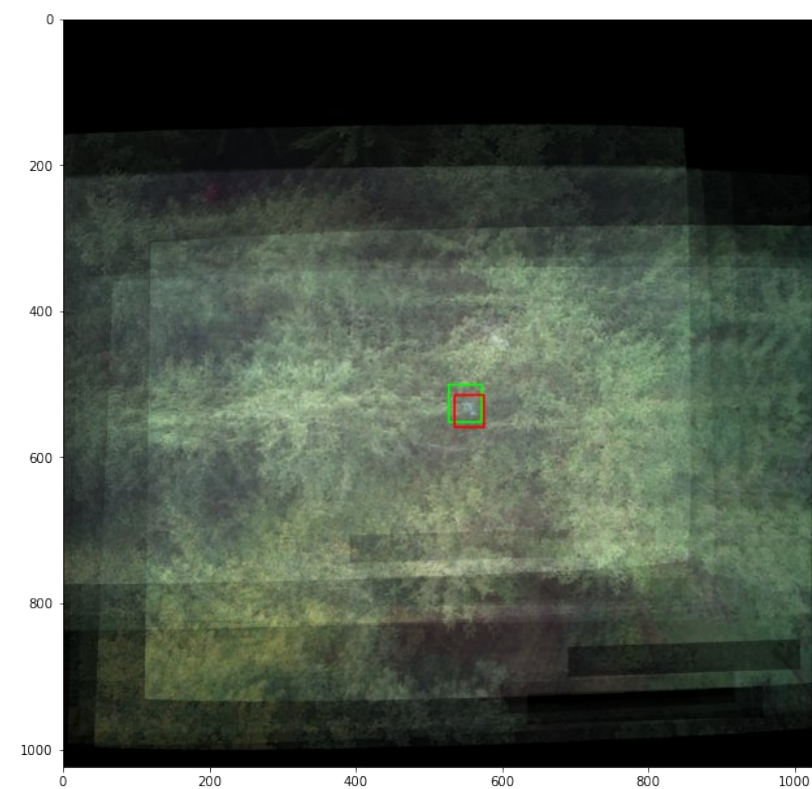
No detection



Slowly moving person not detected



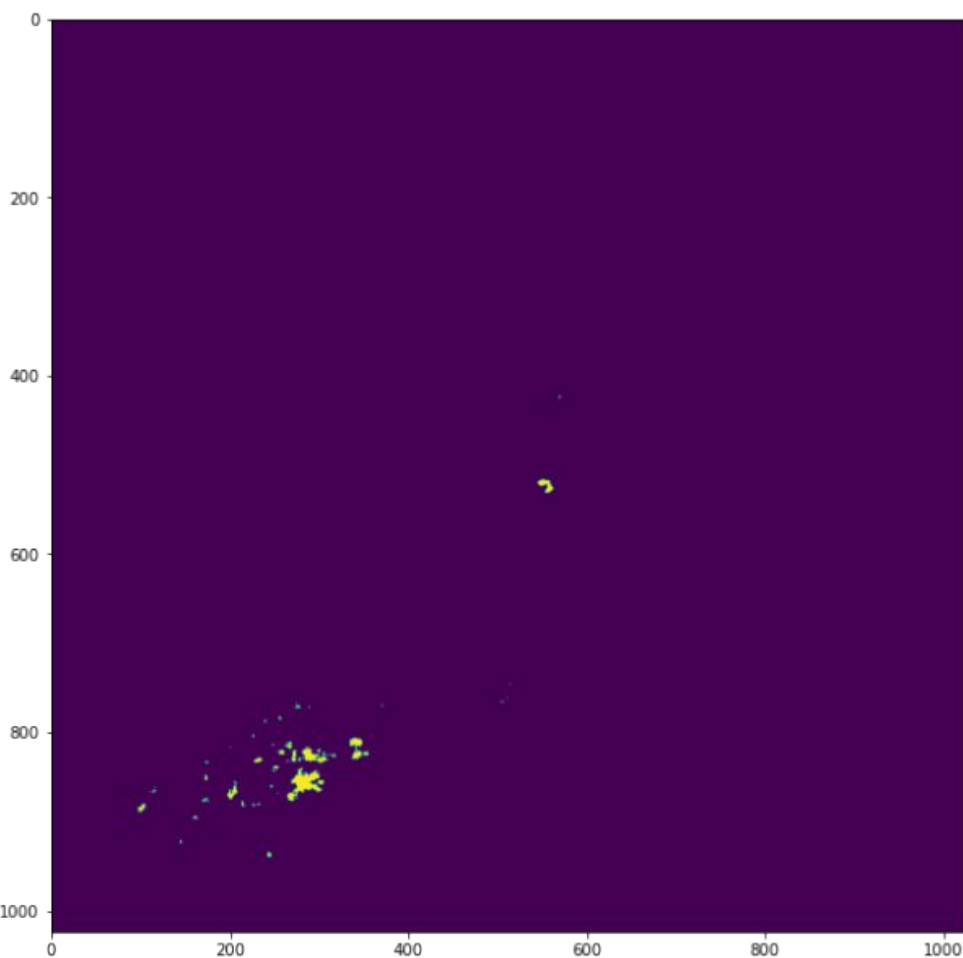
Successful detection



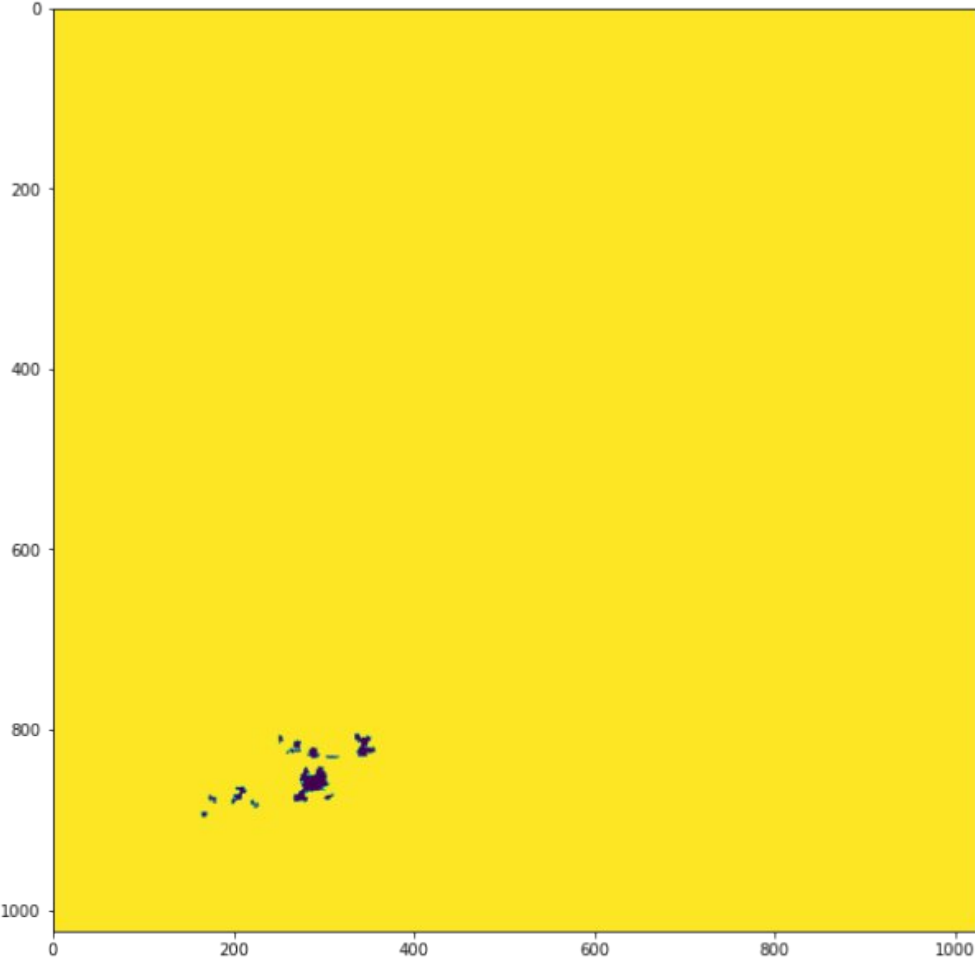
Approach overview

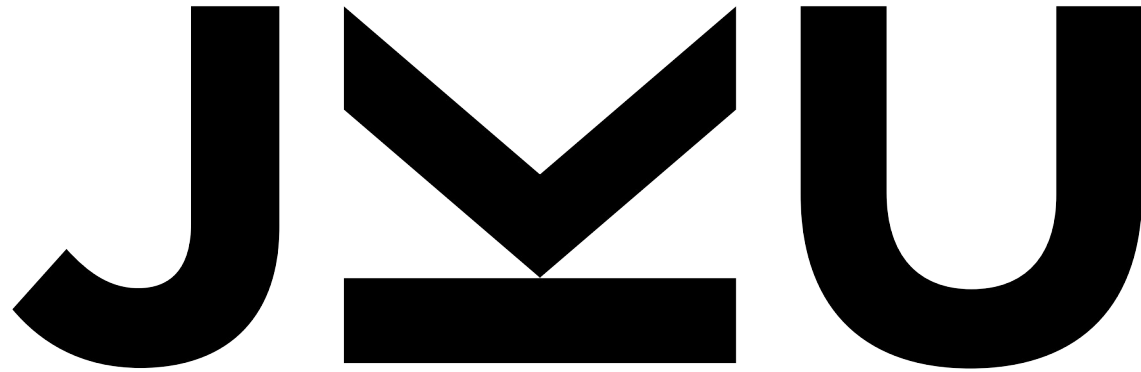
- Anomalies from Mahalanobis distance
- Using timesteps 0, 3 and 6 to detect static/moving objects
- Remove anomalies that are similar to background using first-order statistics
- **Possible improvement:** use of all timesteps to detect moving objects more accurately

Unfiltered anomaly image



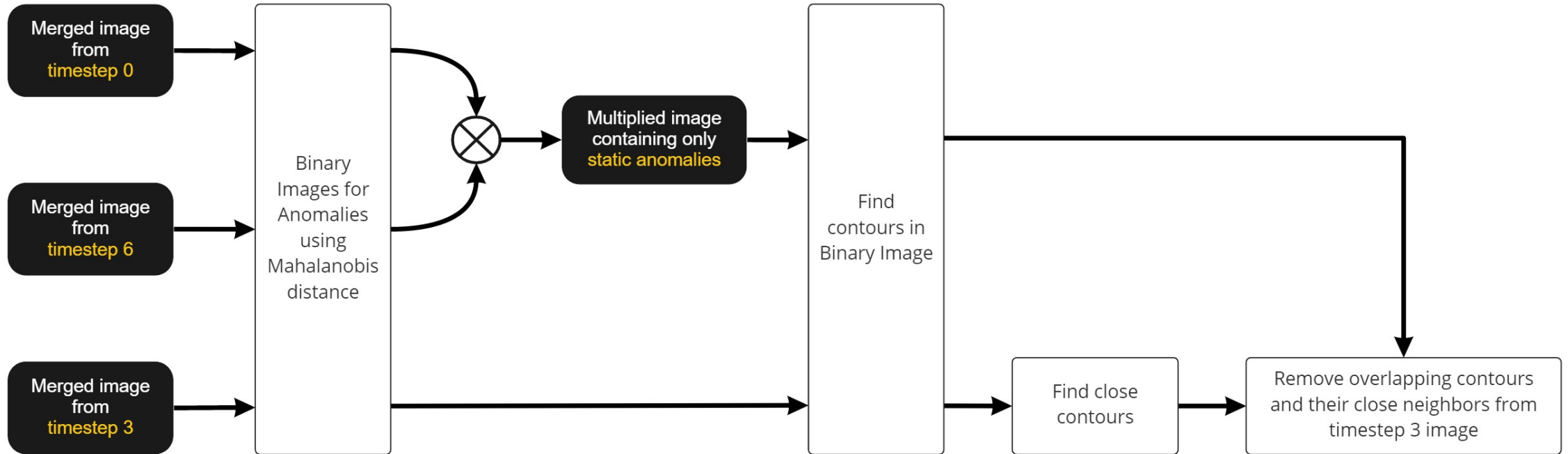
Anomaly image mask



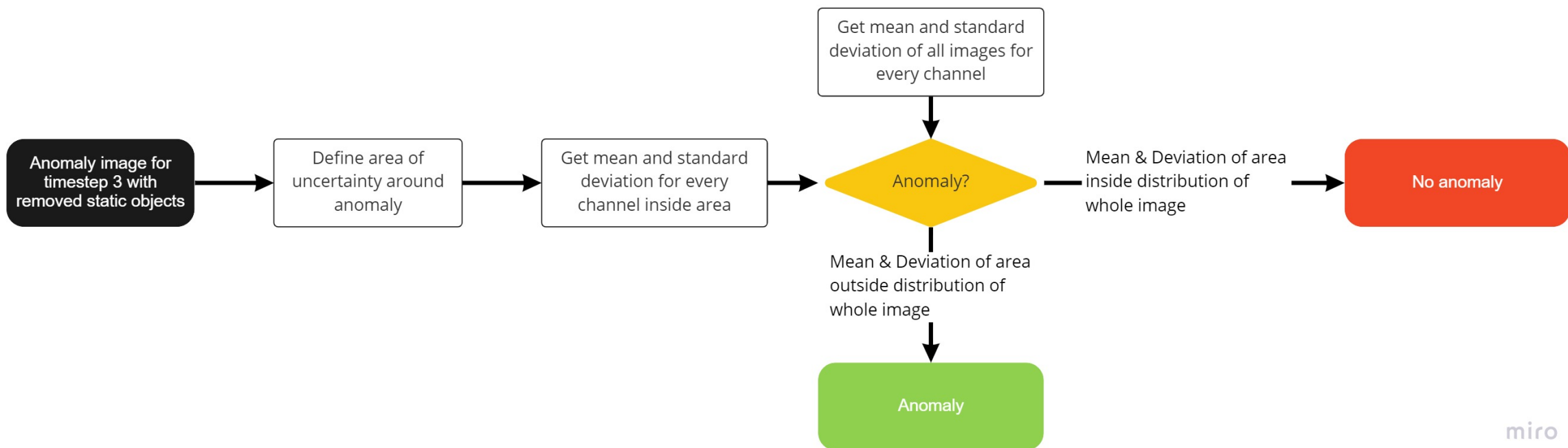


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Anomaly detection algorithm



miro



miro