



# Automated **road segmentation** in high resolution satellite imagery

Stakeholder: NLR

Alex Labro, Bob Leijnse, Midas Amersfoort & Rutger van Woerkom

---

# Reminder

## Topic

- Automated road segmentation

## Datasets

- 20x20km, Amersfoort
- Labelled Roadmap



---

# Method

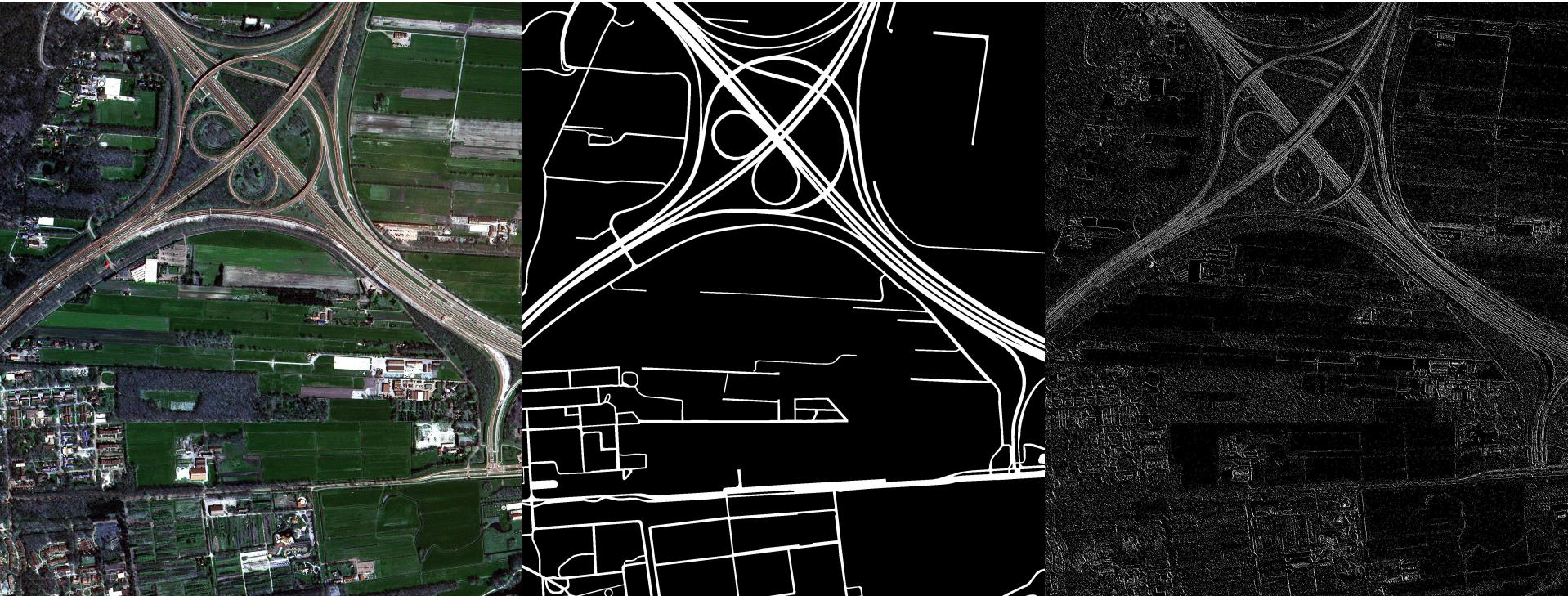
- Airs
- DNN classifier
- 4 hidden layers
- $100 \times 150 \times 100 \times 50$  neurons

R,G,B	R,G,B	R,G,B	R,G,B	R,G,B
R,G,B	R,G,B	R,G,B	R,G,B	R,G,B
R,G,B	R,G,B	<b>R,G,B</b>	R,G,B	R,G,B
R,G,B	R,G,B	R,G,B	R,G,B	R,G,B
R,G,B	R,G,B	R,G,B	R,G,B	R,G,B



# First Results

---





## Current work

- Multi-road classifier
- Post processing
- Determine the best model

---



## Question 1.

What is a good size for the train, test & validation set?

---

## Question 2.

Should we classify all roads at the same time?  
Or first roads and then specific roads?



# Automated **road segmentation** in high resolution satellite imagery

Stakeholder: NLR

Alex Labro, Bob Leijnse, Midas Amersfoort & Rutger van Woerkom