

# Flood Mapping Using Computer Vision

**Advisor: Dr. Yingxiao Liu**

Flooding presents a major challenge for civil infrastructure systems and emergency response efforts. Students learn how image-based AI methods can be used to detect and segment flooded areas, a task relevant to flood monitoring and infrastructure management.

Students will:

- Explore the role of flood monitoring in civil engineering and work with open-source flood imagery.
- Learn the basic concepts of computer vision and AI-based image segmentation.
- Develop and evaluate a model that automatically detects and segments flooded regions in images.

**A basic programming background (e.g., Python, C++, or MATLAB) is required, but no prior knowledge of machine learning or computer vision is assumed.**



\* Image data from Kaggle