**Title**: Mapping rooftop materials across diverse urban landscapes using high-resolution satellite imagery and convolutional neural networks

**Highlights** (3 to 5 bullet points, each a maximum of 85 characters, including spaces):

* A CNN-based pipeline for classifying roof materials across urban landscapes is described.
* Training data was produced by integrating geospatial building footprint and thematic property data.
* High classification accuracy was achieved in Washington, D.C. and Denver, Colorado.
* ResNet-18 outperformed XGBoost overall and for individual roof material classes.
* Open code for scalable computing allows creating roof-type maps across other cities and regions.