# Self organizing maps in urban heat stress projections

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A self organizing map (SOM) is an unsupervised machine learning algorithm well suited for identifying patterns in large datasets. It has been used successfully to classify atmospheric states in climate data and as part of statistical downscaling procedures. This study aims to use SOMs to produce downscaled CMIP5-based projections of wet-bulb temperature in urban areas, taking into account the regional atmospheric state and learned local dynamics. These downscaled projections will be compared to the CMIP5 models as well as to observations and then used to project local extreme heat stress events in the future.