Diploma Thesis / Internship
AI-based Heat Comfort Prediction

The VRVis Research Center (www.vrvis.at) offers a diploma thesis in the field of AI-based methods for urban heat simulation and prediction.

In the project *Climasens: Interactive Microclimate modelling for decision support* (https://climasens.at/en/about-climasens), we develop a microclimate model to support decision making. Our heat simulator based on PALM-4U solves the heat equations at urban scales on a GPU.

We are looking for a motivated student with a good knowledge of python programming (Pytorch or Tensorflow) to design and validate an AI-based prediction model of urban heat comfort. The idea is to learn and predict heat comfort in a complete spatial domain based on just a few measured points and some other input parameters. In addition, the optimal number and location of such measurement points could be learned. If successful, the results can be validated with real world experiments in our case study in Seestadt.

If successful the work will be integrated into the scenarify (http://visdom.at) framework, which is developed at the VRVis. The diploma thesis will be supervised by Dr. Viktor Birschitzky, VRVis Vienna.

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