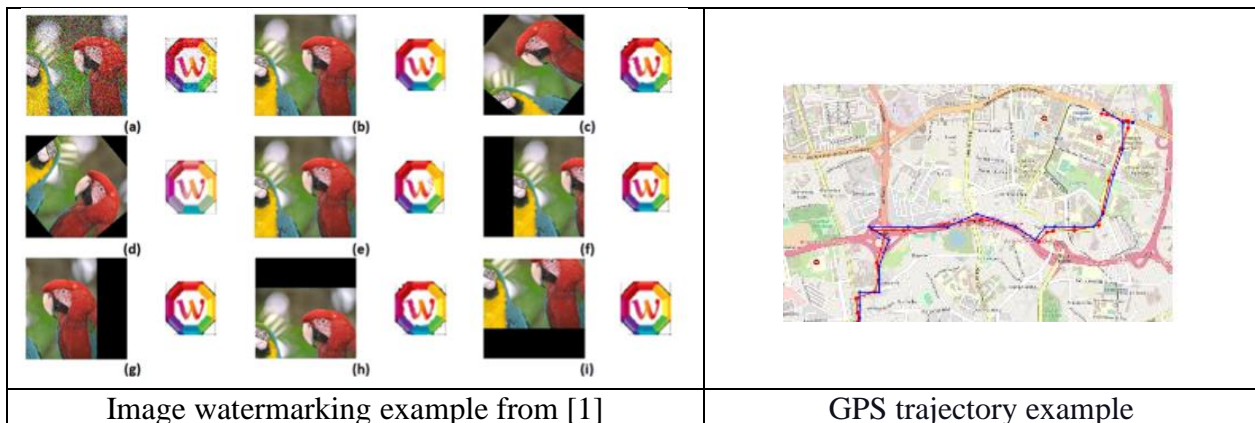


Watermarking GPS Trajectories

Watermarking is a well-known method to include the data origin in the data itself [1,2]. Especially from photo-sharing services such as Shutterstock or Pixabay the perceivable watermarks are known. Another typical asset that is watermarked is audio files, which allow tracking the origin of files on illegal share platforms [2]. However, currently images, videos, or audio are the only fields, where watermarking methods are applied, and for which watermarking methods are available. Since mobility data is an essential part of the growing data market, we want to transfer the existing watermarking approaches to new data types in the mobility domain. The aim of the thesis is to adopt the watermarking methods for GPS trajectories, which represent a typical example of mobility data. The developed watermarking method will be implemented using python and evaluated using existing real-world trajectory data.

Hence, the research questions for this thesis are:

1. How can existing watermarking methods be transferred to GPS trajectories?
2. How resistant are these watermarks to general threats, e.g., addition of noise or clipping?
3. How resistant are these watermarks against mobility-specific threats, e.g., removal of points, the addition of outliers, or resampling?



References:

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Contact:

- Prof. Dr. Elena Demidova: demidova@cs.uni-bonn.de
- Dr. Thorben Funke: tfunke@L3S.de