

## Map Inference with Map Absence

### **Project Description:**

Automatically constructing road networks “maps” from collected GPS trajectories is so important and has many valuable applications. For example, constructed maps can be used to detect changes to the road network and track the progress of it. In addition, it can help pinpoint errors in current maps. Map making could also be used to produce custom maps for certain classes of travelers such as transit riders or tourists. The challenge here is “Can we infer maps without prior knowledge of the existing maps?”

### **Duties/Activities:**

The intern will work on an existing baseline code and get supervision from mentors in tweaking the code to match the designated problem. Then, the intern will test the developed code on real trajectory datasets.

### **Required Skills:**

Python, R, or MATLAB, programming skills are required. Understanding basic machine learning algorithms, or deep learning architectures is a plus.

### **Learning Opportunities:**

The intern will have opportunity to work with a scientist on promising research problems and participate in solving real-world problems.

**Expected Team Size:** 2-3

### **Mentors**

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