

Profile

I am a programmer, a GISer and a cartographer. My interests are mainly related to programming and maps, especially in the areas of route planning, geospatial data processing and cartographic visualization. Most of my personal projects are open-sourced on Github (<https://github.com/tumluliu>). I will be open to global working opportunities in late 2016.

Skills

Software Development

Python, C, Bash, SQL

R, Javascript

C#

GIS Training

ArcGIS, QGIS

PostgreSQL/PostGIS

Route-planning Algorithms

Cartographic Design

CartoCSS

Mapbox Studio, TileMill

CartoDB

Experience

National University of Defense Technology

Lecturer

2/2011-Present

Teaching Geographic Information System course for undergraduates, Spatial Information System course for graduates. R&D work in high-performance GIS, namely HiGIS platform (<http://goo.gl/ldoZ1G>), responsible for: 1). system architecture design; 2). RESTful web services for cartographic visualization; 3). HPC infrastructure purchasing, administration and maintenance.

Education

Technical University of Munich

Cartography

Dr.-Ing., summa cum laude - 2011

National University of Defense Technology

Information and Communication Engineering

Master of Engineering - 2007

National University of Defense Technology

Communication Engineering

Bachelor of Engineering - 2004

Projects

ongoing

Data model and algorithms for socially-enabled multimodal route planning service

National Natural Science Foundation of China (NSFC) project

CartoCSS guide (Chinese version)

Tutorial of cartographic design with CartoCSS as well as the language reference in Chinese. It is an open book published on Gitbook (https://tumluliu.gitbooks.io/carto_zh-cn).

Multimodal route planning in Python

Python package of multimodal route planning algorithms
(<https://github.com/tumluliu/pymmrouting>).

Multimodal route planner (mmrp) API service

A JSON-RPC style API web service of multimodal route planning. Visit <http://luliu.me/?p=96> for more information.

Multimodal route planning demo for Munich

An online demo of multimodal route planning service for Munich. Visit <https://github.com/tumluliu/mmrp-web> for more information.

Multimodal route analysis

A comparative analysis between human trajectories and machine-planned multimodal routes based on crowd-sourced massive GPX data.