

Pengyu Chen

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About Me

A highly motivated and passionate individual with a strong background in GIScience and a deep interest in deep learning and geospatial computing. Experienced in research and team leadership. Excited about exploring intersections between GIScience, IoT, and statistical analysis with a focus on leveraging human-related computing for meaningful research.

Education

University of South Carolina Sept 2024 – May 2026

M.S. in Geography (Geospatial & Urban Computing)

- TA scholarship (Lab Instructor)

Wuhan University of Technology Sept 2020 – June 2024

B.S. in Geographic Information Science

Publications

Socio-demographic inequalities in the impacts of extreme temperatures on population mobility June 2023

Xinyue Gu, Pengyu Chen, Chao Fan

[10.1016/j.jtrangeo.2023.103755](https://doi.org/10.1016/j.jtrangeo.2023.103755) [🔗](#)

Multi-Agent Path Optimization Based on STA* Algorithm Nov 2022

Ruixiang Cheng, Xinyu Wang, Pengyu Chen, Jiaxin Liu

Impacts of Ethiopia Dam on Vegetation and Water and Ecological Countermeasures Nov 2022

Pengyu Chen, Tengyuan Liang, Zibin Wu

[10.1088/1755-1315/1011/1/012044](https://doi.org/10.1088/1755-1315/1011/1/012044) [🔗](#)

Research Experience

Research Intern

Harvard University Spatial Data Lab

remote
May 2024 – Oct 2024

- Spatial Data Laboratory (SDL) Internship Program
- Geographic Big Data Analytics, Spatio-Temporal Data Mining
- Supervisor: Dr. Yuhang Pan, Peking University

Visiting Student & Research Assistant

Wuhan University

Wuhan, China
July 2023 – July 2024

- Trained YOLO-based object detection algorithm and deployed model compression to the K210 microcontroller.
- Application: Detecting Tibetan brown bears and using K210 to drive water pumps and bear spray.
- Currently have a Chinese core journal in submission.
- Supervisor: Prof. Teng Fei

Research Assistant

Wuhan University of Technology

Wuhan, China
June 2023 – June 2024

- Focus on Image Segmentation, Knowledge Map, Remote Sensing.
- Supervisor: Prof. Wei Cui

Research Intern

Clemson University

Remote
Sept 2022 – Jan 2023

- Data processing, data cleaning, and curve generation using MATLAB and Python.
- Published paper in the Journal of Transport Geography.
- Supervisor: Dr. Chao Fan

Independent Innovation Project

Wuhan University of Technology

*Wuhan, China
July 2022 – Oct 2023*

- Used CNN to identify thermal power plants and neural network model to predict carbon emissions.
- Supervisor: Prof. Wei Cui

Teaching Experience

Lab Instructor

Landform Geography (GEOG 201)

*Columbia, SC, USA
Aug 2023 – present*

- Instruct lab sessions, provide guidance, and grade assignments.

Professional Experience

Algorithm Intern

XCMG Road Machinery Division

*Xuzhou, China
July 2022 – Aug 2022*

- Developed digital roads using Leica software and presented results with ArcGIS.
- Implemented and modified curve fitting algorithms for practical applications.
- Supervisor: Bowen Wu

Leading Experience

Development Team Leader, Members of the Council

GISinfo (Subprojects under GISphere)

*Wuhan, China
Feb 2022 – present*

- Developed backend using Django framework with Django REST Framework APIs, connected to MySQL database.
- Built front-end with Vue, managed user demand pool, and led backend development.
- Supervisors: Dr. Yuhao Kang, Dr. Shan Ye
- <https://gisphere.info/>

Chair of the Association

GIS Association of Wuhan University of Technology

*Wuhan, China
2022 – 2023*

Awards

2021 Huazhong Cup Mathematical Modeling Competition, Third Prize

MathorCup Modeling Competition, Third Prize

2022 Huazhong Cup Mathematical Modeling Competition, Second Prize

Technologies

Programming Languages: Python, C#, Java, C++

Software: MySQL, Unity, Unreal Engine, ArcGIS, QGIS, MATLAB

Languages: English (TOEFL iBT 102), Chinese