

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 Human-related Computing. Experienced in research volunteering 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 <i>M.S. in Geography</i>	<i>Sept 2024 – May 2026</i>
◦ TA scholarship (Lab Instructor)	
Wuhan University of Technology <i>B.S. in Geographic Information Science</i>	<i>Sept 2020 – June 2024</i>

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 🔗	
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 🔗	

Research Experience

Visiting Student & Research Assistant <i>Wuhan University</i>	<i>Wuhan, China</i> <i>July 2023 – July 2024</i>
◦ 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 <i>Wuhan University of Technology</i>	<i>Wuhan, China</i> <i>June 2023 – June 2024</i>
◦ Focus on Image Segmentation, Knowledge Map, Remote Sensing.	
◦ Supervisor: Prof. Wei Cui	
Research Intern <i>Clemson University</i>	<i>Remote</i> <i>Sept 2022 – Jan 2023</i>
◦ 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 <i>Wuhan University of Technology</i>	<i>Wuhan, China</i> <i>July 2022 – Oct 2023</i>

- 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

Volunteer 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/>

Website Operations Volunteer

ISUI (Urban Informatics)

Wuhan, China

Feb 2023 – July 2023

- Built backend with PHP and frontend with Vue, hosted on WordPress.
- Developed automated email delivery system and payment/receipt system.
- Website: <http://isocui.org>
- Supervisors: Dr. Rui Cao, Prof. Xintao Liu

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