

## KUANG-CHENG, CHENG

Mobile: +1(608)977-3005 | Email: kcheng38@wisc.edu | Madison, WI | [Portfolio](#)

## EDUCATION

Sep. 2021-	University of Wisconsin-Madison, Madison
May. 2023	M.S. in Cartography and Geographic Information Systems
	<ul style="list-style-type: none"> <li>GPA: 3.83</li> </ul>

**Sep. 2011-  
Jun. 2015**     **National Central University, Taoyuan, Taiwan**  
**B.S. in Civil Engineering**  
 • EAC accredited program.  
 • GPA: 3.34.

## PROJECTS

- **Spatial Big Data Analysis & Visualization:**  
“Madison Metro Transit Redesign Evaluation” - Perform statistical data analysis and visualize spatial data on an interactive map using Python in Jupyter notebook).
- **Spatial Database Design and Management:**  
“US National Parks Recreational Database” - Create database to integrate visitation records, facilities, and spatial data inside or nearby national parks using PostgreSQL (with PostGIS extension).
- **GIS Analysis:**  
“Road salt use impact on major sensitive areas in the metropolitan area of Marathon County”-Perform spatial analysis and map the potential contamination strength on each road for marathon county transportation planner.
- **Geovisualization and UI/UX Design:**  
“United States Exports By Industry” - Create a web-based user interface to visualize the data collected from the Observatory of Economic Complexity (OEC) using JavaScript/HTML/CSS with Leaflet library.
- **GIS Development Practicum:**  
“Yearly ridership data analysis and visualization” - create a workflow for open data aggregation, open data publishing, and spatial data management and visualizations.
- **Cartography (Mapping) Design:**  
“Taiwan Public Transportation Infrastructure – bus ridership vs. population”-Aggregate data from multiple open data resources and visualize data on a map using ArcGIS Pro and Adobe Illustrator.

## WORK EXPERIENCE

Jan. 2022- Aug. 2022	<b>GIS Metadata Technician</b> <i>Department of Geography, University of Wisconsin-Madison</i> <i>Madison, WI</i> <ul style="list-style-type: none"> <li>Assessed LiDAR data inventory statuses</li> <li>Created original ISO metadata for nearly 400 new Wisconsin county datasets</li> <li>Added interactive tile indexes for Wisconsin LiDAR-derivative data resources</li> <li>Edited Wisconsin V8 county parcel data using Python</li> </ul>
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Aug. 2019- Jun. 2021	<b>Assistant Engineer</b> <i>Ministry of Transportation and Communication</i> <i>Taipei, Taiwan</i> <ul style="list-style-type: none"> <li>Coordinated 14 agencies for the mask distribution (logistics) project for COVID-19</li> <li>Processed mask demand and accounting data, and analyzed the mask demand trend</li> <li>Evaluated communication task guidelines for air, shipping, and road transportation</li> <li>Updated, maintained, and delivered routine mobilization data</li> <li>Arranged the annual training program for senior officers and project leaders</li> </ul>
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Feb. 2018- Jul. 2021	<b>Junior Engineer</b> <i>Freeway Bureau</i> <i>New Taipei, Taiwan</i> <ul style="list-style-type: none"><li>• Examined and revised environmental impact assessment reports</li><li>• Held environmental education event to educate all employees of the Freeway Bureau, including the director</li><li>• Digitized Taiwan's freeway historical slides and photos</li></ul>
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Nov. 2016- **Junior Engineer**  
Feb. 2018 *Taiwan Area National Expressway Engineering Bureau* *Taipei, Taiwan*

- Examined design drafts and contracts of national bridges

**Jul. 2014-  
Aug. 2014**     **Engineer Intern**  
*CECI Engineering Consultants, Inc.*     *Taipei, Taiwan*

- Gained experience at the most prominent civil engineering design company in Taiwan
- Visualized civil engineering project drafts and data on Google Earth
- Completed sectional drawings of roads on the mountain area of Tai-20 (one of Taiwan's provincial highways) using AutoCAD

## **CERTIFICATION**

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**2016**     **Professional and Technical Personnel Examinations of Civil Engineers, Taiwan**

- Certificate issued by Ministry of Examination, R.O.C. (Taiwan).
- Officially qualified to be a Professional Civil Engineer in Taiwan.
- Qualification Rate (2016): 11.53%.

**2016**     **Civil Service Level Three Senior Examination in Civil Engineering, Taiwan**

- Certificate issued by Ministry of Examination, R.O.C. (Taiwan).
- Passed the public servant exam, Junior Engineer (Grade 5-7).
- Qualification Rate (2016): 25.78%.

**2016**     **Civil Service Junior Examination in Civil Engineering, Taiwan**

- Certificate issued by the Ministry of Examination, R.O.C. (Taiwan).
- Passed the public servant exam, Engineering Assistant (Grade 3-5).
- Qualification Rate (2016): 35.7%.

## **EXTRACURRICULAR ACTIVITIES**

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**2014**     **Team Leader**  
*Fabrication of Concrete Mini Canoe Competition between National Central University and Tokyo Institute of Technology*

- Won 2<sup>nd</sup> place in the competition.
- The top 10 candidates out of 120 students in the department of civil engineering.

**2012**     **Vice President**  
*Magic Club of National Central University*

- Organized venues for club activities, events, and exhibitions.
- Filed activity reports and application forms to Office of Student Affairs.
- Reviewed weekly courses for club members.
- Informed club members of club news and events.

## **SKILLS**

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**Languages:** Mandarin Chinese (native), English (fluent).

**Computer Software:** AutoCAD, SketchUp, ArcGIS Pro, QGIS, MS Power BI, Adobe Illustrator, MS Office (including Word, Excel, PowerPoint)

**Programming:** Python, SQL, C++(basic), HTML/CSS/ JavaScript

**Cloud Computing Environment:** Google Cloud Platforms, ArcGIS Online (AGOL)

**Database System:** PostgreSQL (with PostGIS) and MongoDB

**Other:** Multi-tasking, Time Management, Problem-solving, Project Coordination, Supervisory Skills, Data Management, Communication