Shan Ye

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EDUCATION

University of Wisconsin-Madison, Ph.D. in Geoscience, Minor in Computer Sci. *2018 – 2022 (exp)*
- Cyberinfrastructure and software development for geoscience
- Spatiotemporal data analysis in paleoclimate & data-model comparison

University of Tulsa, M.S. in Geosciences *2016 – 2018*
- Numerical analysis (Finite Element Method) on geomechanics (buckling fold)
- Geospatial analytics on induced seismicity in Oklahoma

University of Michigan, B.S. in Earth and Environmental Sciences *2013 – 2015*

Pennsylvania State University, GIS *2011 – 2013*

EXPERIENCE

Research Assistant (EarthCube), University of Wisconsin-Madison *2018– present*
- Developing frontend (data submission forms / interactive maps) and backend functions (data uploading portal / database / API) of the Sparrow software (the cosmogenic branch) with Python and JavaScript – *https://sparrow-data.org*
- Validating the Cretaceous age model of Macrostrat database, and creating new polygons to enhance the spatial resolution. Conducted spatiotemporal data processing in QGIS and R, identified all discrepancies of PBDB Cretaceous dinosaur age data, and refined dinosaur diversity records both spatially and temporally at genus and species levels – *https://macrostrat.org*
- Utilizing natural language process and machine learning methods to extract spatiotemporal data regarding ice-rafted debris (IRD) in the past 5 million years from published literature. Located 30 IRDs from 1000 randomly selected geoscience journal articles – *https://geodeepdive.org*

Internship in Geophysics, Chinese Academy of Sciences *2015 – 2016*
- Research on seismic data processing, visualization and interpretation regarding shale gas reservoirs

GIS Analyst, University of Michigan *2013– 2014*
- Created 3D models of Michigan Basin and Lake Michigan in ArcGIS and Petrel based on geological and geospatial data
- Conducted spatial analysis in ArcGIS and R, and located hot spots of potential water pollution from hydro-fracking
- Built interaction web maps with Leaflet to display mineral/fossil sample locations, data and pictures

SKILLS

Expertise in Python and R
Working knowledge in C++, Java, JavaScript, HTML and CSS
Experiences with Google Cloud, Docker, Flask, MySQL, Access, React, Leaflet and D3.js
Software: ArcGIS, QGIS, PostgreSQL/PostGIS, GeoDa, ABAQUS, Illustrator, Petrel, Mathematica

ORGANIZATIONS

American Association of Petroleum Geologists (AAPG) *2016 – now*
Association of American Geographers (AAG) *2012 – now*
Society for Sedimentary Geology (SEPM) *2016 – 2018*
North American Cartographic Information Society (NACIS) *2012 – 2017*
Tulsa Geological Society (TGS) *2016 – 2018*

TEACHING

Temporary instructor in GEOL 4083 (GIS for geology), University of Tulsa   *Spring 2018*
Student instructor and discussion section facilitator in UC 270 (social justice),   *2014 – 2015*
University of Michigan
Teaching intern in GEOG 363 (GIScience), Pennsylvania State University   *Fall 2012*

Extra-Curricular Activities

Translator of textbook *Exploring Geology* by Reynolds et al., English to Chinese   *2019, in prep*
Esri China GIS Day Mapping Contest: won 1st place   *2019*
"Awesome Geology" Outreach Competition (co-sponsored by China University   *2018*
of Geosciences and China Geology Survey): received 3rd-place prize
President of AAPG University of Tulsa Chapter (awarded *L. Austin Weeks* grant)   *2017 – 2018*
Imperial Barrel Award 2017 competition: represented University of Tulsa as the   *2017*
structural geologist and GIS analyst
Outreach & pop-sci writer on multiple online-platforms and magazines in China,   *2015 – now*
including *Zhihu*, *thePaper*, *China National Geography*, *Human & Nature*, *Open
Classroom*, *etc.* More than 5 million cumulative views since Jan. 2018.

Awards and Scholarships

Weeks Assistantship, University of Wisconsin-Madison   *2018 – 2019*
Recognition of Global Excellence, University of Michigan   *2014*
University Honors, University of Michigan, 2 times   *2013 – 2015*
Erickson Fund in Geography, Pennsylvania State University   *2013*
Dean's List, Pennsylvania State University, 3 times   *2012 – 2013*