

Katherine (Katy) Yut

Geospatial Data Engineer

Austin, TX · katy.yut@gmail.com · [GitHub](#) · [LinkedIn](#)

Expert in geospatial analysis, data visualization, and programming using R and Python. Passionate about efficiency and optimization. Seeking to solve complex problems to make the world a better place. Meticulous, intrinsically motivated, and a quick learner.

EXPERIENCE

Data Engineer · Grassroots Carbon

Aug 2025 – Present

San Antonio, TX (hybrid)

- Building ETL/ELT data pipelines using Python, GitHub, and Docker containerization at a company passionate about doing right for the land, the rancher, and the world.

Tools: Python, H3, matplotlib, Salesforce, APIs, SQL, GitHub, Docker, Pydantic, Streamlit, cron, CI/CD, APIs, code review

Carbon Technical Manager · Grassroots Carbon

Aug 2024 – Aug 2025

San Antonio, TX (hybrid)

- Automated rancher eligibility screening processes using RShiny and Python through the Salesforce API.
- Provided geospatial data analysis using QGIS.
- Supported the navigation of carbon standards.

Tools: R, RShiny, Python, QGIS, LULC, geospatial analysis

GIS & Energy Data Analyst · University of Texas, Bureau of Economic Geology

May 2022 – Jul 2024

Austin, TX

- Leveraged R to clean and manipulate data tables, solve problems, and automate processes.
- Utilized ArcMap to aid in oil & gas research publications.
- Published research findings as papers, posters, and presentations.

Tools: big data, R, ArcGIS, geospatial analysis, data visualization

EDUCATION

Master of Arts: Economics and Big Data

Bachelor of Arts: Economics and Big Data

Bachelor of Science: Geographic Information Science

University of Oklahoma (Norman, OK)

Aug 2016 – May 2021 · *Summa cum laude*

SKILLS

Expert	R, RShiny, ArcGIS, QGIS, geospatial analysis, data visualization
Advanced	Python, GitHub, Salesforce, Big data, Pydantic, CI/CD, APIs, code review
Intermediate	SQL, Docker, Google Earth Engine, ENVI, Streamlit, cron, H3, matplotlib, Landsat, Sentinel-2, LULC, TerrSet, Trimble GPS
Strengths	Timely deliverables, Clear communication, Curiosity, Organization, Multitasking, Focus

RESEARCH

Smye, K. M., [Yut, K.](#), Reedy, R. C., Scanlon, B. R., Nicot, J. P., Hennings, P. (2024). [Challenges with managing unconventional water production and disposal in the Permian Basin](#). *AAPG Bulletin* 108 (12), 2215–2240.

Peng, S., Maraggi, L. M. R., Bhattacharya, S., [Yut, K.](#), McMahon, T., Haddad, M. (2023). Feasibility of CO2 storage in depleted unconventional oil and gas reservoirs: Capacity, microscale mechanism, injectivity, fault stability, and monitoring. *URTeC*, 13–15 June 2023.

Bull, M., Francis, T., [Yut, K.](#), Weber, K., Spruce, J., Jarnevich, C. (2019). [West Virginia Ecological Forecasting](#). *NASA DEVELOP National Program*.

Kelley, S., [Yut, K.](#), Kulkarni, R., Gaffin, D. (2019). [Avoidance of rosemary oil by scorpions](#). *Journal of Arachnology*.