

Deniz Karabakal, Associate

Synapse Energy Economics | 485 Massachusetts Avenue, Suite 3 | Cambridge, MA 02139
dkarabakal@synapse-energy.com

PROFESSIONAL EXPERIENCE

Synapse Energy Economics, Cambridge, MA. *Associate*, September 2024 – Present.

- Conducts quantitative and qualitative research and analysis on energy-sector issues, including grid resilience, gas peaker plant retirement, and electric vehicle rate impacts and design.
- Writes reports and white papers related to energy-sector policies and issues.

Research Associate Intern, June 2023 – August 2023.

- Analyzed economic effects of clean hydrogen production tax credits in the Inflation Reduction Act
- Wrote blog post on the future role nuclear energy in the energy transition.
- Mapped interstate electricity transmission using QGIS.

Tufts Department of Urban and Environmental Policy and Planning, Medford, MA. *Research Assistant*, May 2023 – August 2024.

- Modeled resilience of Boston transportation system to extreme weather events using Eclipse SUMO (Simulation of Urban Mobility) open-source transportation simulation software, working with Professor Shan Jiang.
- Utilized Tufts HPC (High Performance Computing cluster) to run simulations.
- Visualized model outputs using Python libraries such as Seaborn, Matplotlib, and OSMNX

Dimensional Insight, Burlington, MA. *Consultant*, May 2018 – August 2022.

- Translated customer requests for data dashboards and reports into consulting work that generated actionable insights for 8-10 clients, primarily in the healthcare and beverage industries.
- Extracted, transformed, and loaded data from source systems using SQL-based tools into data warehouses. Wrote scripts to create data visualizations for web applications.
- Held regular meetings with clients to define project objectives and provide updates.
- Collaborated with coworkers and clients to help develop applications used by healthcare systems such as Penn Medicine and Baptist Health South Florida.
- Provided support and guidance to customers experiencing technical issues. Identified software bugs and worked with developers to create fixes when necessary.

EDUCATION

Tufts University, Medford, MA.

M.S. in Environmental Policy and Planning, 2024.

Certificate in Spatial Data Analytics, 2024.

University of Michigan, Ann Arbor, MI.

B.S. in Informatics (Data Mining and Information Analysis track), 2017.

Minor in Writing, 2017.

SKILLS

ArcGIS, Python, Excel, Eclipse SUMO

PUBLICATIONS

Glick, D., T. Gyalmo, D. Karabakal, L. Metz, C. Resor. 2024. *Review of Tennessee Valley Authority's Draft 2025 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.

Scenario Analysis of Scenario Analysis of Resilience to Extreme Snowfall Events in Greater Boston. Thesis (M.S.) -- Tufts University, 2024.

Resume updated January 2025