DEREK DOHLER, JD
Senior Full-Stack Engineer

Derek Dohler, full-stack developer at The Water Institute, brings more than a decade of experience in software engineering to his work of building robust, performant web applications based upon scientific data.

Upon completing his bachelor's degree in computer science and then a law degree, Derek used his expertise with Transparency International - Georgia, in Tbilisi, Georgia as digital projects officer. In this position, Derek built web applications promoting the accountability of Georgian government bodies based on open government data. Subsequently, he became a co-founder and board member of Open Law Library, a legal technology non-profit that is dedicated to making all official laws freely and openly accessible. Open Law Library created and now operates the first automated legal codification and publishing engine.

Prior to joining the Institute, Derek was senior software engineer at Azavea, Inc. (now Element 84) in Philadelphia. In this position, Derek led the development of DRIVER, a traffic crash reporting system used by the Philippines National Police to replace a paper- and spreadsheet-based reporting system and contributed to many geospatial web applications built for a variety of public- and private-sector clients.

Throughout his work, Derek combines his computer science expertise with a passion for taking large amounts of data and developing the technological bridges that allow the data to be used in decision support tools for the public and government. The result of Derek's work is the development of tools that make large amounts of data actionable. Derek has authored several open-source software libraries that continue to generate users.

PROFESSIONAL EXPERIENCE

2023–Present: Senior Full-Stack Engineer, The Water Institute

2023: Senior Software Engineer, Element 84

2019–2023: Engineering Lead, Geospatial Applications Team, Element 84

2017–2018: Senior Software Engineer, Element 84

2013–2017: Software Engineer, Element 84

2015–Present: Co-Founder and Board Member, Open Law Library

2010–2013: Digital Projects Officer, Transparency International Georgia

ORGANIZATION ROLE

Senior Full-Stack Engineer

PROJECT ROLE / FOCUS AREAS

Open-source software development

Geospatial web application development

Software engineering and infrastructure

Open-data web application development

EDUCATION

JD, The University of Chicago Law School, 2010

BS, Computer Science, Washington University in St. Louis, 2007

PROFESSIONAL MEMBERSHIP

Michigan Bar Association

Board of Directors, Open Law Library

SELECTED PROJECTS / PRODUCTS

Wildfire Risk to Communities. *United States Forest Service (Ongoing).* Initial Project Technical Lead. The tool allows the public to type in community, tribal area, country, or state and view an interactive chart about wildfire risk as well as access resources to reduce risk.

DRIVER. *World Bank (2019).* Project Technical Lead. DRIVER (Data for Road Incident Visualization, Evaluation, and Reporting) was developed to help low- and middle-income countries to better collect road crash information for improved road safety support solutions. GitHub location here.

Cicero. *Azavea, Inc. (Ongoing).* Software Engineer. Cicero is a database of elected officials and legislative districts around the world. The tool allows for matching addresses to legislative districts at all levels of government.

Groundwork. *Element 84, Inc. (Ongoing).* Software Engineer. Groundwork is a labeling solution for remotely sensed imagery which can be used to generate labels for training machine-learning models.

SELECTED OPEN-SOURCE CONTRIBUTIONS

1. GDAL-JS, a WebAssembly port of GDAL
   https://github.com/ddohler/gdal-js
2. Loam, a client-side Javascript wrapper for GDAL
   https://github.com/azavea/loam