

# DAN MAHR

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dmahr.com

## EXPERIENCE

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**Geospatial Director, Origin Solar Energy** – Somerville, MA (remote) February 2016 – present

- Technical lead for startup originating commercial- and utility-scale solar energy sites with renewable energy partners. Used geographic information systems (GIS) software to identify ideal sites for further development.
- Developed proprietary model for evaluating each site's feasibility for solar based on capacity factor, environmental hazards, municipal permitting regimes, utility infrastructure and interconnection, and socioeconomic trends.
- Codified system for gathering relevant spatial and tabular from public and private sources.
- Implemented company-wide Salesforce CRM instance for managing and tracking leads generated by GIS model.

**Senior GIS Analyst, The Cadmus Group** – Waltham, MA June 2011 – February 2016

- Specialist in GIS and remote sensing for environmental consultancy. Firm-wide coordinator of GIS staff and resources. Responsible for data visualization, analytics, and custom Python geoprocessing tool development for ArcGIS.
- Created custom tools for The Nature Conservancy to optimally site of oil and gas infrastructure and visualize results in a browser-based dashboard. Modeled soil loss in a 100,000 sq. mile study area, including necessary cut and fill regrading.
- Modeled distribution of energy efficiency subsidies and associated "leakage" to non-ratepayers for utilities in AR and MA using Network Analyst drive-time isochrones. Leveraged American Community Survey data to analyze socioeconomic and demographic characteristics near retailers, marketing events, and utilities using Network Analyst.
- Supported research, calculation, aggregation, and visualization of watershed-scale indicators of climate change vulnerability for US Army Corps of Engineers from CMIP5 projected climate data using Python and the NumPy module.
- Modeled service areas of drinking water utilities using limited demographic and training data for EPA. Used by EPA's Office of Ground Water and Drinking Water to characterize environmental justice of contaminant occurrence.
- Developed geoprocessing tools that used and edited to NHD hydrography data to calculate riparian metrics for EPA.
- Modified EPA air modeling software AERMOD to function globally for USAID air quality project in Kosovo.

## EDUCATION

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**Harvard Extension School** – Cambridge, MA 2015 – 2016

- Graduate credit coursework: *E-22 Data Structures* using Java; *E-20 Discrete Mathematics for Computer Science*.

**Brown University** – Providence, RI 2007 – 2011

- Bachelor of Science in Environmental Science; GPA 3.7 out of 4.0; graduated with honors May 2011; Sigma Xi.
- Curriculum focus in geographic information systems (GIS), remote sensing, land use, geology.
- Honors thesis: *Drivers of land-use change in Mato Grosso: A ten-year MODIS analysis*. Developed a novel phenology classification to analyze 10 years of multispectral satellite data for a 1 million km<sup>2</sup> study area.

**Phillips Exeter Academy** – Exeter, NH 2003 – 2007

## SKILLS

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- Expert in Microsoft Office suite: Word, Excel, PowerPoint.
- Advanced knowledge with ESRI ArcGIS 10.3+ Desktop, including custom geoprocessing tools, Spatial Analyst, Network Analyst, geocoding, hydrological analyses, geodatabase management, and cartography.
- Extensive experience with Python, including ArcPython, NumPy, SciPy, and matplotlib, among others.
- Experienced in remote sensing data processing and analysis using ENVI software and IDL programming.
- Proficient in Salesforce CRM administration, Java, HTML, CSS, Microsoft Access, Adobe Creative Suite.
- Top 50 contributor to GIS.StackExchange—crowdsourced GIS question and answer community.

## PUBLICATIONS & PRESENTATIONS

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- Four-time guest lecturer: *Introduction to ArcPython*, Introduction to Geographic Information Systems for Environmental Applications, Brown University, Providence, RI, 11/3/2015, 10/28/2014, 10/15/2013, 10/16/2012.
- VanWey, L. K., Spera, S., de Sa, R., **Mahr, D.**, & Mustard, J. F. (2013). Socioeconomic development and agricultural intensification in Mato Grosso. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 368(1619).
- Conference presentation: *Modeling Environmental Impacts of Shale Gas Infrastructure on Surface Hydrology*, 2014 AWRA Spring Specialty Conference: GIS and Water Resources, Snowbird, UT, 5/14/2014.