DAN MAHR

dmahr.com   linkedin.com/in/danmahr

EDUCATION

Carnegie Mellon School of Computer Science – *Pittsburgh, PA*   Dec. 2018
- Master of Science in Computer Science student; expected graduation December 2018.
- Curriculum focus in geospatial data management and analytics: Distributed Systems, Algorithm Design & Analysis, Machine Learning (spring 2018), Cloud Computing (spring 2018), Multimedia Databases & Data Mining (spring 2018).

Harvard University Extension School – *Cambridge, MA*   Sep. 2015 – May 2017
- Graduate classwork: *E-22 Data Structures*, *E-20 Discrete Mathematics*, *E-26 Intro to C/Unix*, *E-66 Database Systems*.

Brown University – *Providence, RI*   May 2011
- Bachelor of Science in Environmental Science; GPA 3.7 out of 4.0; graduated with honors May 2011.
- Curriculum focus in geographic information systems (GIS), remote sensing, land use, geology.

Phillips Exeter Academy – *Exeter, NH*   May 2007

EXPERIENCE

Chief Technology Officer, Origin Solar Energy – *Somerville, MA (remote)*   Feb. 2016 – Jul. 2017
- Technical lead at five-person startup identifying ideal sites for commercial- and utility-scale solar farms.
- Developed proprietary geographic information systems (GIS) decision support model evaluating solar suitability based on irradiance, environmental hazards, municipal permitting regimes, and utility infrastructure. Dramatically improved the quality and quantity of sites identified versus previous non-algorithmic approach.
- Deployed Salesforce CRM instance for managing leads generated by GIS model, replacing tracking spreadsheets.

Senior GIS Analyst, The Cadmus Group – *Waltham, MA*   Jun. 2011 – Feb. 2016
- Consultant and GIS specialist for 350-employee environmental firm. Company-wide lead for developing GIS technical approaches with clients and internal coordination of GIS staff and resources.
- Implemented large-scale data analytics workflows, and developing custom geoprocessing tools for Esri ArcGIS Desktop in Python, and visualized geospatial data in cartographically attractive maps,.
- Created custom ArcGIS geoprocessing tools in Python that modeled mobilization and transport of soil for optimal siting of oil and gas infrastructure, and visualized results in a browser-based dashboard.
- Modeled distribution of energy efficiency subsidies and associated "leakage" to non-ratepayers for utilities in AR and MA using Network Analyst drive-time isochrones with retailer locations, utility territories, and customer data.
- Supported research, calculation, aggregation, and visualization of watershed-scale indicators of climate change vulnerability US Army Corps of Engineers from CMIP5 projected climate data using Python and the NumPy module.

SKILLS

- GIS: Esri ArcGIS Desktop (ArcMap and ArcGIS Pro), ArcPython custom geoprocessing tools, Spatial Analyst, Network Analyst, geocoding, hydrological analyses, geodatabase management, and cartography.
- Programming languages: Python (including, NumPy, SciPy, matplotlib), C/C++, Java, IDL, Javascript, HTML, CSS.
- Frameworks and tools: Hadoop MapReduce, MongoDB NoSQL, Git.
- CRM: Salesforce deployment, administration, and development with Apex, SOQL, SOSL.
- Community: Top 60 contributor to GIS.StackExchange—crowdsourced GIS question and answer site.

PUBLICATIONS & PRESENTATIONS

- 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).
- Five-time guest lecturer: *Introduction to ArcPython*, Introduction to Geographic Information Systems for Environmental Applications, Brown University, Providence, RI; 10/27/16, 11/3/15, 10/28/14, 10/15/13, 10/16/12.
- 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.