

John Kelly

Cartographer + Geospatial Software Engineer + Director of Technology

jhnkilly@gmail.com | 510-326-3623
-122°24'3", 37°47'23"

Mission

I make maps and apps to explore, visualize, and communicate geospatial data.



Technical Skills

Geo: PostGIS, ArcGIS, QGIS, Mapserver, Leaflet, arcpy, mapnik, Tilestache, Tilecache, GDAL/OGR, Mapsense, Shapely, Turf.js, Openlayers, Google API, utfgrid, vector tiling, Topo/GeoJSON, CartoDB, Mapbox Studio & js, ArcSDE, innumerable APIs...

Front end: JavaScript, CSS, HTML, jQuery, d3, innumerable libraries,...

Back end, etc: PHP, Python, SQL (esp. PostgreSQL, MySQL), web app frameworks (CodeIgniter, Django, general MVC & CMS), Apache, Amazon EC2/S3, PhoneGap/Cordova, linux shell,...



Experience

GreenInfo Network

Director of Technology 2014 - Present

Geospatial Analyst & Cartographer 2008 - 2014

- Portfolio of my work: <http://bit.ly/1EOUKW1>
- Creating web map applications using diverse technologies to interactively engage the intended audience. Developing features with dynamic updating, report generation, complex analytical functions and visually effective cartography.
- Technology lead for the California Protected Areas Databases (CPAD, CCED).
 - ✓ Redesigned as a relational database to have the power and flexibility of PostGIS and the quality control of referential integrity and attribute constraints.
 - ✓ Automated assessment of spatial accuracy of millions of vertices and parcel-aligning of low-precision polygons to a database of 11 million county parcels.
 - ✓ Developed ETL methods to build CCED from agency sources for consistent updating.
- Engineering "MapCollaborators" and other in-browser apps to empower groups without GIS training to create and edit geospatial data.
- Cultivating skills in staff through mentorship and training on best practices.
- Building tools (from ArcObjects and arcpy to Javascript and PostGIS) to automate and consistently reproduce analysis and to streamline map production.
- Generating efficient solutions to our clients' most difficult geospatial challenges, as well as proposing solutions which they have not considered.
- Implementing and evolving the state-of-the-art in cartography.
- Applying physics and mathematics training to statistically and spatially analyze data, often solving problems previously considered intractable.

Costa County Public Contra Works Department

Information Systems Programmer/Analyst 2003 - 2008

- GIS analysis, GPS surveying and map-making for multiple engineering and planning divisions.
- Developed tools with ArcObjects to facilitate the work of GIS specialists.
- Re-engineered GPS databases for increased efficiency and quality control.
- Managed GIS analysis on countywide data inventories.

Save Mount Diablo

Volunteer Cartographer 2004 - 2006

- Contributed hundreds of hours to create an innovative, detailed map of 100,000+ acres and 500+ miles of trails in the Mount Diablo & Los Vaqueros areas.
- Thousands of the large, durable maps distributed via REI and SMD to help people enjoy the public lands in and around the state park, increasing awareness and support for conservation.
- Developed geospatial software to calculate and visualize elevations at trail junctions, peaks, and valleys.

Diablo Valley College

Assistant Instructor 2003 - 2004

Initiated hands-on labs to instruct students in Introductory and Advanced GIS courses.

Professional Cyclist 2000 - 2005

Silver medalist at the U.S. National Track Championships in the Individual Pursuit, 5th place at the U.S. National Championships in the 40km time trial and dozens of race wins. Indispensable workhorse for world class teammates.

Princeton University Physics Department

Lab Instructor & Teaching Assistant 1999 - 2000

Worked with professors to design, teach, and evaluate a new method of teaching physics to engineering students. Led lab class and study group.



Education

Princeton University 1994 - 2000

Bachelor's degree, Physics

Diablo Valley College 2002 - 2004

Certificate in Geographic Information Systems



Interests

Conservation and social justice, equitably applied civil rights, experiencing the natural world and helping to preserve it, rock climbing, bike touring, lexicography, running, contract bridge games, backpacking...