

Professional Experience

Lead Software Developer

May 2012 – Present

Texas Natural Resources Information System, Texas Water Development Board • Austin, Texas

- Leading the development of the second version of the *Geospatial Emergency Management Support System*, a web application to provide emergency responders, decision makers, and the public-at-large with an interactive, real-time map interface for viewing and creating spatial data (ASP.NET MVC4, ExtJS, OpenLayers, Backbone.js).
- Developing an interactive web application for displaying recommended water management strategies and other data from the 2012 State of Texas Water Plan (ASP.NET MVC4, Backbone.js, OpenLayers).
- Assisting in the transition from vendor-based GIS and web/web-mapping servers to an open software-based ecosystem, including GeoServer, GeoNetwork, TileStache, and NGINX, among other fun stuff.

Partner and Consultant, Coseppi Partnership

August 2011 – January 2012

CAMBIAR Program • Huaraz, Ancash, Peru

- Provided instrumental on-ground support for the Climate Adaptation in Mountain Basins in the Andean Region (CAMBIAR) program of Engineers Without Borders Greater Austin, The Mountain Institute, and the Tres Cuencas Commonwealth.
- Met with stakeholders, drafted foundational program documents, prepared grant applications and budget estimates, collected field data, prepared maps, and created communications and development plans for the program.

Research Fellow and Graduate Research Assistant

June 2009 – May 2011

Center for Research in Water Resources, The University of Texas at Austin • Austin, Texas

- Designed and developed *WOFpy*, an open-source Python module for publishing water data in standard formats from various back-end data sources. This package is currently in use by the Texas Water Development Board.
- Participated in the writing of a concept development study on the use of Open Geospatial Consortium standards for sharing water information.
- Authored a thesis on the use of Open Geospatial Consortium web service and data encoding standards for sharing hydrologic data in a distributed services-oriented architecture.
- Developed components of the *HydroDesktop* open-source (C# .NET) desktop hydrologic information system software.
- Performed complex statistical analyses using the R-project statistical software.

Analyst Consultant

August 2007 – January 2009

Accenture • Austin, Texas

- Developed core front-end components of an international web platform (Java - BEA Portal) for a major hotel corporation and managed a peer developer who was having difficulty meeting quality standards and deadlines.
- Analyzed and documented the software architecture (Perl) of an online banking system client wishing to transition to a services-oriented architecture.

Education

Master of Science, Environmental and Water Resources Engineering | Fall 2010

The University of Texas at Austin • Austin, Texas

Bachelor of Science, Computer Engineering, & Bachelor of Arts, Chinese | Spring 2007

The University of Maryland • College Park, Maryland

Technical Skills

- Proficient or familiar with many technologies and programming languages, particularly related to web development, web mapping, and Geographic Information Systems. Most skilled in ASP.NET MVC4 (C#); ExtJS, Backbone.js, OpenLayers, jQuery, ESRI Javascript API (Javascript); Flask, Django (Python). Have also worked with various other technologies/languages such as MongoDB, MySQL, Ruby on Rails, Sinatra, and more!
- Able to quickly learn programming languages, frameworks, and architectural patterns.