

# Trent Pingenot

## Geospatial Developer

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I am a geospatial developer with over 20 years of experience. I began by consulting and developing in the ESRI ecosystem for desktop and web applications. In 2007, I transitioned to Open Source software and have been primarily developing code in that environment ever since. I develop throughout the full web stack, including DevOps, ETL, server side code, databases, API creation and front end development. I am well versed in spatial and non-spatial data wrangling, analysis and application development.

I started GeoDevelopment in 2010 in order to work with multiple clients. I am a responsible and accountable professional with a history of independent service. I have strong communication and interpersonal skills and am adept at translating client needs and expectations into solutions. For me, geospatial development is both a career and a calling. I see the value and impact of software solutions in solving problems and I find that personally fulfilling.

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## Skills

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Python (2 & 3), Django, Django Rest Framework, Flask, Pandas, GeoPandas, Shapely, Fiona, BeautifulSoup, Zappa, REST API Creation and Consumption, Regular Expressions  
PostgreSQL 8-12, PostGIS, AWS (S3, RDS, Lambda, API Gateway, EC2, Athena, SQS, SNS, Step Functions, more), Mapbox, Google Maps API, Leaflet, OpenLayers, HTML, JavaScript, CSS, jQuery, Google Earth, KML, GeoJSON, Linux Administration (Ubuntu, Redhat, Amazon Linux), Apache2, Git, Subversion, Docker, QGIS, Spatial Analysis, Geographic Projections, Cartography, MapServer, GeoServer, Tilecache, SQL including spatial SQL, PHP, FPDF, Ansible, Docker, MySQL, Microsoft SQL Server, SQLite, SpatiaLite, Jupyter Notebooks

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## Experience

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### GeoDevelopment / Owner

January 2010 - PRESENT, Denver, Colorado

- Work with clients through all phases of application development
- Create ETL processes for a wide variety of data and databases
- Prepare data visualizations through maps, charts and tables
- Perform development operations (DevOps) for Linux and serverless environments
- Build multi user web applications using Python, PHP and JavaScript
- Develop web maps using a variety of JavaScript mapping APIs

### The Timoney Group / GIS Developer

May 2007 - December 2012, Denver, Colorado

- Developed dynamic web applications for Google Earth and Microsoft Virtual Earth
- Wrote programs and data loading scripts in Python, PHP, VBA and .NET
- Engineered applications to connect to Access, PostgreSQL, Oracle and SQL Server
- Designed dynamic KML using spatial SQL queries

### Geowest / GIS Developer

January 2007 - March 2009, Denver, Colorado

- Authored Python and ArcGIS models to perform routine geo-processing tasks
- Created ArcObjects applications to automate map book creation
- Automated data inventory process using Microsoft Excel and Crystal Reports

### ESRI Chile / Consultant

October 2006 - December 2006, Santiago, Chile

- Consulted on system design for Chile's National Online Atlas and GeoPortal
- Researched and documented current world trends for geospatial portals and NSDI's
- Developed sections of functional, implementation and architectural design documents
- Created prototype portal using ESRI's Geoportal Toolkit 3.1

## **National Institute of Biodiversity (INBIO) / Volunteer**

April 2006 - August 2006, San Jose, Costa Rica

- Created ArcObjects tools for custom geographic datum transformations and map creation
- Wrote ArcGIS ModelBuilder Python scripts and models for data processing and analysis
- Analyzed plant and animal species locations for grant reports
- Assisted INBIO GIS department employees with problem solving and technical assistance

## **Destiny Resources / GIS Specialist**

October 2003 - December 2005, Golden, Colorado

- Created VB.NET, VB6, VBA applications using Microsoft objects and ArcObjects
- Analyzed environmental data through 3D interpolation and other geostatistical models
- Created animations and complex figures of modeled environmental data
- Managed multiple projects including troubleshooting and GIS problem solving

## **ESRI Denver / Graduate Research Assistant**

September 2002 - October 2003, Broomfield, Colorado

- Created ArcObjects based tools for clients
- Assisted with application development and support for ArcIMS and ArcGIS
- Helped develop training materials for GeoDatabase Jump Starts
- Completed training courses in ESRI software including ArcObjects, ArcGIS and ArcSDE

## **Landscape Analysis Lab / Research Assistant**

June 2000 - July 2001, Sewanee, Tennessee

- Responsible for multiple image source scanning, rectification and land-use delineation
- Performed analysis of tabular, coverage and image data to determine land use change
- Trained and assisted staff and professors in basic GIS operations
- Presented research results at conferences and in publications

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## **Education**

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### **University of Denver / Masters of Science in Geographic Information Science**

August 2001 - May 2003, Denver, Colorado

### **Rhodes College / Bachelor of Arts in Urban Studies and Sociology/Anthropology**

August 1996 - May 2000, Memphis, TN

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## **Awards**

**Robert Rudd Memorial Outstanding Graduate Student**, Denver, CO, June 2003

**Algernon Sydney Sullivan Award**, Memphis, TN, May 2000

**Eagle Scout**, Boy Scouts of America, Springfield, MO, October 1994