

## Roles and Skills

**Software Engineer:** Golang, Python, Shell scripting (Bash, Make), Interactive Data Language (IDL), Fortran, Perl, Node.js, C/C++, CPU/Memory Line Profiling, Query Tuning

**Full Stack Web Developer:** Python (Django, Flask), ORM (Django, SQLAlchemy, MongoEngine), Javascript/ES6, KnockoutJS, PHP, Perl, Databases (ANSI SQL, PostgreSQL/Netezza, SQL Server, MySQL, Oracle, MongoDB/DocumentDB, SQLite)

**DevOps Engineer:** Continuous Integration (GitHub Status Checks, TravisCI, TeamCity, Python fabric/paramiko), Unit Testing, Code Coverage, ...

**SecDevOps Engineer:** Burp Suite, CIS Benchmarks, OWASP ZAP, Veracode, GWAPT GIAC Web Application Penetration Tester Certification, ...

**Threat Intelligence SME:** STIX/TAXII Voting Committee Member, Snort/Suricata, Yara, Proprietary/OSINT, TIP, SIEM, SOAR, EDR/XDR, Splunk, ELK, AlienVault OTX, IBM X-Force Exchange, MITRE ATT&CK, osquery, Kolide Fleet

**Network Security Engineer:** Suricata Intrusion Detection (IDS)/Inline Intrusion Prevention (IPS)/Network Security Monitoring (NSM), Cyber Threat Intelligence

**Software Packaging/Release Engineering:** Configuration Management (Ansible, SaltStack), Build/Packaging (RedHat/CentOS RPM, SystemD, Packer, Vagrant, Docker), Cloud Deployment (AWS, Rackspace/OpenStack)

**Data Scientist:** Exploratory Data Analysis (Jupyter Notebooks, Python Pandas), Machine Learning (TensorFlow, SciKit Learn, R), Visualization (D3, bqplot, plotly, Matplotlib, Leaflet, MapBox), Reporting, Academic/Technical Writing

**Spatial/Statistical Analysis:** ArcMap, Quantum GIS, Python (OGR/GDAL, Fiona, Shapely, Rasterio, etc.), R, GeoDa, FME/FME Server, R, SAS, SPSS, PostgreSQL (PostGIS, PL/SQL, PL/R, PL/Python)

**Development Methodologies:** Agile, Test Driven Development (TDD), Behavior Driven Development (BDD), GitFlow, Jira/XRay, Git, Mercurial, Subversion, GitHub Enterprise

**Developer Advocacy:** Blogging, Conferences, Documentation, Social Media, Training, Webinars, ...

**Sales Engineering:** Needs Assessment, Proof-of-Concept, Rapid Prototyping, ...

## Education

<b>GWAPT GIAC Web Application Penetration Tester</b> SANS London	2020
<b>Graduate Certificate - Predictive Analytics</b> University of South Florida	2015
<b>Fulbright Scholar</b> University of Helsinki & Aalto University	2006-2007
<b>Master of Arts - Geography</b> University of South Florida	2006
<b>Graduate Certificate - Geographic Information Systems</b> University of South Florida	2005
<b>Bachelor of Science - Management Information Systems</b> University of South Florida	2003

## Experience

**Soltra (DTCC/NC4/Celerium/Dark Cubed)** November 2014–present

### Senior/Consulting Software Engineer

- Lead Engineer for Intrusion Detection/Prevention SaaS (Dark Cubed)
  - Golang, Kafka, Elasticsearch, Redis, on Kubernetes
- Full Stack Web Development for Cyber Threat Intelligence Appliance (Soltra Edge)
  - Django, jQuery/KnockoutJS, MongoDB/MongoEngine, Celery on CentOS

### DevOps Engineer, Packager, and Release Manager

- Maintainer and Release Manager for dozens of project RPMs
- RHEL/CentOS systems configuration and administration
  - Configuration-as-code with Ansible and SaltStack
  - Center for Internet Security (CIS) benchmark conformance
  - Security auditing and remediation
- Dev/Prod parity improved using Vagrant, Packer, and Docker for Virtual Machine/Cloud Image creation and Ansible for configuration management

## **Team Leadership**

- Developed onboarding and cross-training plans
- Established, socialized, and monitored (with TravisCI/GitHub Status Checks) coding guidelines and team norms
- Improved the feedback loop between Dev and QA teams resulting in higher quality with less rework and zero SEV1s
  - Facilitated the maturation of manual tests with Jira XRay

## **USF Water Institute**

December 2013–November 2014

### **Database Team Lead**

- SysAdmin for SQL Server cluster
  - Managed dozens of databases
  - Complex query writing, stored procedures, and reporting
- Led database development team
  - Interviewed, trained, and mentored student employees
- Refactored Stored Procedures and Extract, Transform, Load (ETL) workflows (140+ SSIS Packages); tracked with Git
- Implemented Django web application (OpenTreeMap, in beta)
- Led statistical analysis project using R and SQL Server

## **Catalina Marketing**

April 2013–October 2013  
(6-month contract)

### **Python Web Developer (Back End)**

- Python Flask micro-framework with RabbitMQ and Celery
- Netezza/Oracle/Postgres, SQLAlchemy Object Relational Model (ORM)
- Continuous Integration (TeamCity) and Code Quality (PEP8, Unit Testing)

## **WeoGeo**

February 2007–November 2012

### **Interim Director of Professional Services**

- Founded the Professional Services business unit

- Fortune 50/500 clients including Northrop Grumman, [Pitney Bowes](#), and Digital-Globe
- Assessed customer needs for proposal development
- Searched, evaluated, and implemented tool chains for:
  - \* Enterprise-scale Data Processing
    - Custom Data Transformations with Python, FME, PostGIS
  - \* Custom Web Cartography with ArcMap, TileMill, OpenLayers
- Created OGC compliant web services for client data

### **Sales Engineer**

- Developed and delivered technical demonstrations to clients and investors
- Acted as technical point of contact for client interaction
- Conducted needs assessment interviews and proof-of-concept demonstrations
- Oversaw production workflow development and communicated progress to clients

### **Developer Advocate/Technology Evangelist**

- Created developer documentation and narrative blog series to demonstrate usage
- Founded the [technical blog, Dwell Time](#), which demonstrated:
  - Creative, outside-the-box applications of technology
  - Utilization of WeoGeo SDK
  - Customer integrations which “primed the pump” for Professional Services
- Promoted platform at industry workshops, conferences, and trade shows (FOSS4G, Esri Dev Summit, PyCon, PyData, O’Reilly Strata, SciPy, etc.)
- Forged strategic alliances with industry thought leaders
- Created conference exhibit collateral, hardware, demonstration, and process for lead generation and follow up (interview forms, mail merge, sales funnels, etc.)
- Created a community platform in 2007 including WordPress MU, phpBB2 Forum, and MediaWiki on LAMP (Linux, Apache, MySQL, PHP)
- Utilized social media to promote community platform, strategic partners, and services
  - [@dandye](#) is [included in the Twitter Lists](#): Geospatial Influencers, GIS, Geospatial, geospatial, Geospatial Faves, geo, geo people, etc.

## **University of South Florida**

August 2005–December 2006

### **Graduate Teaching/Research Assistant**

- Graduate teaching assistant for Geography Department’s undergraduate Introduction

to Remote Sensing course

- Planned the curriculum for and taught the associated IDL/ENVI lab
- Research and thesis project involved monitoring and modeling water quality
  - Sponsored by Veolia Water and Tampa Bay Water

## Florida Environmental Research Institute

April 2001–June 2005

### Scientific Programming, Research Assistant/Associate

- Performed Scientific Visualization and statistical analysis for Dr. W. Paul Bisset's ecological/optical model of the West Florida Shelf ([EcoSim 2.0](#))
  - Co-author for several academic journal articles including [the peer-reviewed journal, Marine Chemistry](#)
  - Designed and programmed validation for EcoSim2 using satellite data (SeaWiFS) as ground truth
- Devised, programmed (in IDL), and executed data processing pipelines for Dr. David D.R. Kohler's designs for the calibration, characterization, and processing of the [Portable Hyperspectral Imager for Low Light Spectroscopy \(PHILLS2\)](#) data into reflectance and remote sensing products ( $R_{rs}$ , Chlorophyll, etc.)
  - Spatial and Spectral sensor calibration data collected in NRL's optics lab
  - Radiometric correction, atmospheric correction, and products
  - Implemented a Genetic Algorithm to solve for and remove effects of stray-light within the instrument (Dr. Kohler's design)
  - Field work with the instrument aboard a NOAA Cessna Citation
  - Prototyped direct parametric ortho correction of both pushbroom scanner and digital frame imagery using Trimble's POSPac software and ReSe's PARGE
- Processed raw satellite data (Level0) into georectified remote sensing reflectance ( $R_{rs}$ ) and products (Chlorophyll, etc.) using Naval Research Laboratory's Automated Processing System (APS) and the SeaWiFS Data Analysis System (SeaDAS)
- Co-designed and programmed a web-based data selection, processing, and distribution application for hyperspectral data (HyDRO)
  - This project evolved into the startup WeoGeo
- System and Network Administration for the research institute's Windows and Unix/Linux environment

## Conferences and Hackathons

- [HashiConf Europe](#) (Finland 2021)
- [EU ATT&CK Community Workshop](#) (Finland 2021)
- [AWS GameDay Nordics](#) (Finland 2021)
- [SANS OSINT Summit](#) (Online 2021)
- SANS [SEC542: Web App Penetration Testing and Ethical Hacking](#) (London 2019)
  - Earned the GIAC Web Application Penetration Tester (GWAPT) certification in 2020
  - Team won the NetWars challenge coins for the three-day Capture the Flag
- [Humanity+ Future of Humanity Institute](#) (London 2019)
- [Suricon](#) (Amsterdam 2019)
  - [Advanced Deployment and Configuration with Suricata](#) (Amsterdam 2019)
- PyData [Miami 2019](#), [Santa Clara 2012](#), ... more
- O'Reilly JupyterCon [New York 2018](#)
  - Full-day [TensorFlow Tutorial](#)
  - Full-day [Kubernetes Tutorial](#)
  - [JupyterCon Community Sprint Day](#)
- [National Day of Civic Hacking 2018](#)
- [Harvard Personal Genome Project Hackathon](#) (Boston 2018)
- PyCon - [Montreal 2015](#), [Santa Clara 2012](#), ... more
- SciPy (Austin 2012, 2013)
  - on the Program Committee for the Geospatial Track in 2013
- Free and Open Source Software for Geospatial (FOSS4G)
  - Denver 2011, Barcelona 2010, Sydney 2009
- [AWS Start-Up Challenge](#) (Seattle 2007)
- American Association of Geographers (AAG)
  - Winner of poster competition in 2005
- [O'Reilly Strata](#) (Santa Clara 2012)
  - Exhibited my “feelSpace Belt” in the Mini-Maker Faire
- Esri Dev Summit Palm Springs and Esri User Conference San Diego (3 years each)
- [AMP Camp Three – Analytics and Machine Learning at Scale](#) (UC Berkeley 2013)
- BarCamp and Ignite
  - Sarasota 2011, Orlando, Portland, ... more
- Hillsborough County Hackathon
  - [First Place 2014](#)

- City of Tampa Hackathon
  - [Blog post on Wayback Machine](#)
- FME User Conference
- ASPRS (Photogrammetry and Remote Sensing)
- WhereCamp
  - [WhereCampTB + IgniteSpatial](#) (Tampa 2012)
  - [WhereCamp](#) (Mountain View 2010)

## Meetups and User Groups

- Tampa Bay Python User Group (co-organizer from 2008-2015)
- University of South Florida Python User Group (co-founded in 2013, now defunct)
- Tampa Bay Microcontroller Meetup (co-founded in 2008)
- Suncoast Linux User Group
- ... many more: [70 Groups and 223 Events](#)