# Roles and Skills

**Software Engineer:** Python, Interactive Data Language (IDL), Shell scripting (Bash, Make), 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

**GWAPT GIAC Web Application Penetration Tester** 2020
SANS London

**Graduate Certificate - Predictive Analytics** 2015
University of South Florida

**Fulbright Scholar** 2006-2007
University of Helsinki & Aalto University

**Master of Arts - Geography** 2006
University of South Florida

**Graduate Certificate - Geographic Information Systems** 2005
University of South Florida

**Bachelor of Science - Management Information Systems** 2003
University of South Florida

# Experience

## Soltra (DTCC/NC4/Celerium) November 2014–present

**Senior/Consulting Software Engineer**
- 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
  - 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