Python Developer Python Developer Python Developer - Consolidated Edison East Orange, NJ Work Experience Python Developer Consolidated Edison November 2018 to Present Performed geospatial development in Python and ArcGIS to develop road closure online dashboard application for emergency responders. Developed the Python backend framework to communicate with Oracle database, export data into Pandas dataframes and interface with Arcpy library to genocode data. Developed functionality to statistically analyze dataframe using Pandas and Numpy statistical features. Developed restful API to communicate with ArcGIS Online Server to communicate data. Developed Windows Service application with Python to perform data uploads at specific intervals. Developed and enhanced frontend dashboard with ArcGIS Javascript API, ArcGIS Web AppBuilder and ArcGIS Online to display geospatial data in a reactive dashboard environment. Engineering Professor New York City College of Technology - New York, NY August 2014 to November 2018 Serve as assistant faculty member in the Construction Management and Civil Engineering Department at the New York City College of Technology. Prepare and present lecture material for undergraduate civil engineering courses in fluid mechanics and land surveying. Prepare and conduct laboratory experiments, and grade student assignments and exams. Conduct analytical academic research using Python object relational models, network connection and data analysis. Research involves connectivity to remote data sources using network protocols with urllib, Beautifulsoup, asyncio, and websocket connection. Data analysis for these data sources uses packages such as Pandas, Numpy, Scipy and Pyspark machine learning on AWS EC2 Service to generate meaningful data insights and regression analysis. Setup research and development server to run Python web-service in Django with Postgres database server, big data applications on Hadoop data cluster and run Scala applications within Pyspark, SQL and NoSQL applications within Pymongo. Setup and run microservices in a Python backend. Run research applications to access HDFS from Pyspark programs and perform queries on HDFS with Pymongo. Setup ESRI ArcGIS online maps to retrieve, display and store engineering research data. Developed Javascript frontend to interact with user and communicate with backend databases and server applications to perform data queries and data analysis on a web application. Python Developer Bank of America - New

York, NY June 2018 to August 2018 Developed Python backend applications using Quartz Qztrades. Development involved troubleshooting system errors, developing messaging API, and formulating unit tests f nagers tracked our project progress through a JIRA Agile Technology platform which required me to monitor the JIRA dashboard with job assignments and submit progress reports and completion status. Python Instructor CODEIT, INC - Hoboken, NJ June 2017 to December 2017 Instruct introductory level Python development to high school graduates within Hoboken Housing Authority. Teach students fundamentals of Python coding and algorithms using open source software and teaching tools. Develop code projects on Github and instructional presentations in Python, Django, SQL in Postgres and Mysql, and AngularJS for course material. Mentored students through their coding project and tutor students for the Python Expert Rating Exam. Python Developer BNP - Paribas - New York, NY June 2016 to September 2016 Developed Python, Django, Twisted and Asyncio web service applications concentrating in class based views and RESTful API to analyze and report financial data analysis results and deploy as a Windows service. These web service applications used Python's multithreading and database libraries in an object-oriented framework to run multiple applications asynchronously and store and retrieve results in a common MSSQL database. Frontend development to these applications involved Javascript development using Angular/JQuery libraries concentrating in controller and directive constructs to update the web interface dashboard in real-time. Managers tracked our project progress through a JIRA Agile Technology platform which required me to monitor the JIRA dashboard with job assignments and submit progress reports and completion status. Data Analyst Verizon Wireless - Branchburg, NJ May 2015 to August 2015 Analyzed geospatial relationships of cost to revenue ratio of cellular service, signal strength between carrier providers and usage volume of cellular network. Developed Python data analysis tools using Pandas, Numpy, and Scipy to perform multivariate regression analysis on network data. Certified in ArcGIS by completing ESRI training in ArcGIS I: Instroduction to GIS and Market Analysis using ESRI Business Analyst. Used ArcGIS and Business Analyst to access geospatial databases, Postgres databases and MS Access and perform geospatial querying and regression analysis towards determining optimum market areas

within cellular network. Used Business Analyst to develop business reports of geospatial regions to display market analysis of telecom network. Developed Python routines in ArcGIS to perform and automate market analysis functions. Research Hydraulic Engineer U.S. Army Corps of Engineers Research and Development - Vicksburg, MS August 2011 to August 2014 Engineer on research project to setup Python web-service on Redhat Linux server using Web2py web framework. Developed backend web modules to access government data servers with Open-Dap, Sensor Observation Service(SOS), and FTP in Python. Developed backend Python interface to MySQL, Postgres and Oracle databases. Developed backend Numpy and Scipy numerical routines to analyze and process oceanographic and meteorologic data from government sponsored online sources including National Oceanic and Atmospheric Administration (NOAA). Developed model-view-controller (MVC) web framework in Python, HTML and Javascript. Developed frontend web pages to present the user's data and downloads in graphical and tabular form using HTML, Jquery, AngularJS and bootstrap CSS. Responsible for developing, testing, documenting and marketing these programs to users gaining their feedback and recommendations. Co-leader on research project to analyze production data from dredging fleet. Developed numerical routines in Python Numpy, Scipy and Pandas to analyze the streaming data from onboard ship computers and sensors. Developed Oracle database SQL queries to extract, modify and store dredging fleet data from remote data server. Developed engineering reports using data analysis and linear regression results from Python Pandas and presented results in graphical form using Python plotting utilities. Lead engineer on Dredging Knowledge-Base Expert August 2002 to August 2011 System to solve dredge project performance metrics based on engineering project and hydraulic pipeline parameters. Developed and tested the programs using Matlab mathematical software, Java, C Language Expert-system, and Python scripting. Responsible for development of program on a web-based interface, comparing program results to operational field data, presenting conference papers and publishing results in a peer-reviewed ASCE journal. Lead engineer on dredging fleet data study to determine viable trends in dredging production and throughput. Used statistical analysis in Matlab and Java to determine national dredging volume trends and cost data. Developed

engineering reports and published conference proceedings and presented findings at conference. Education Ph.D. in Dredging Texas A&M University - College Station, TX December 2010 M.S. in Environmental Engineering Auburn University - Auburn, AL August 2002 Hydraulic Engineering Auburn University - Auburn, AL August 1999 Skills Java (9 years), Javascript (8 years), Matlab (9 years), Postgres (8 years), Python (10+ years) Links https://github.com/derekawilson72 https://www.linkedin.com/in/derek-wilson-39220068

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