Partner, Senior Information Security Engineer Partner, Senior Information Security Engineer Senior Information Security Engineer Jersey City, NJ Authorized to work in the US for any employer Work Experience Partner, Senior Information Security Engineer DML Partnership - Brooklyn, NY May 2019 to Present Created a partnership with an old colleague to develop a deployable Information Security Appliance to fill a much needed gap in the Information Security and IDS environments with the intent of securing VC funding to further our development efforts. Tasked myself with developing the APIs and Python backend to allow remote devices to communicate over VPNs and ZMQ. Designed the web framework in Flask on Python 3 with a MariaDB database. APIs included receiving encrypted data, transmitting running code upgrades to the remote devices, clock synchronization and pushing updated machine learning results. Compared machine learning results from Scikit, Tensorflow and Pytorch. Python backend was designed on AWS to reduce overall costs and allow us to expand as needed. Senior Information Security Engineer Wells Fargo Bank - Charlotte, NC July 2018 to April 2019 Joined the team to assist in the management and continuous upgrading of a third-party Asset Tracking system, to manage the millions of networked devices across the bank. Converted and refactored external APIs to connect into the vendor product. Began work on automation procedures to create an internal version of the scanning system. Provided detailed reports for bandwidth, runtime and data storage requirements for the various competing methods for the new system. Worked with Docker and Jenkins to streamline automated code deployment across the anticipated new system hardware. Designed various APIs and microservices on the Flask framework with Python 3 and connected this into the corporate LDAP authentication system. Created custom Splunk reports to utilize JSON output for ingestion into the new Flask website. Designed a remote polling system to ensure the successful SNMP connectivity to over 4 million devices. Converted R Scripts into Python 3 with Numpy and Pandas. Provided detailed documentation of the various APIs for future deployment. Senior Python Developer Independent Contracting - Jersey City, NJ January 2018 to July 2018 Researched the current climate for independent small business IT consulting with the intent of re-starting the small business I had run years before. Tasks included assisting clients with application development in Python with the

Pyramid webserver, E-commerce in Squarespace & Django, ETL transformation, Unicode repairs, upgrading data storage systems from Excel & Access to proper MySQL/MariaDB installations, website development and networking tasks across North Jersey, NYC and Connecticut. This six month venture was canceled after proving to be unprofitable. Senior Information Security Engineer Cincinnati Bell Technology Solutions - Cincinnati, OH April 2014 to January 2018 Joined CBTS as an employee to provide development services to various client contracts. Senior Information Security Engineer GE Aviation/Digital - Evendale, OH March 2015 to December 2017 Evendale, OH (remote) Contracted as a 100% remote developer to provide a complete rewrite of a major GE-wide email virus sandboxing system. Created a detailed (self-managed) project plan including milestone tracking and management reports and was able to provide a fully-operational prototype within 6 months. System was designed in Python with a Pyramid front-end, Pyinotify to detect file system changes. Streamlined the design and operation of the Windows XP VMs to alleviate the need to individually manage over 80 VMs. Converted existing legacy monitoring and tracking systems to provide transparent operation with new functionality and downstream applications. Upgraded the system to operate with a multithreaded ZMQ message queue as the primary communications method to ensure the receipt of multiple simultaneous messages. Tracked VM health and provide immediate re-cloning of the VM and re-issuing of malicious files whenever a VM crashed unexpectedly. Provided a POC for deploying VMs onto new clean AWS instances which would have resulted in increased capacity and decreased cost-per-VM. Designed a POC to use a Machine Learning system as a Sandbox pre-processor to reduce the need for repeatedly sandboxing similar files. Provided detailed documentation, code commenting, installation and troubleshooting instructions, and staff cross-training to ensure that anyone could restart the system 24hrs/day. Worked with the Airbus Group in Germany & France to support an industry-led effort to combat and prevent actors from hacking into airplanes and associated standalone aircraft equipment. Provided GE with a fully operational rewrite of the existing 3000+ line codebase within 2.5wks (10hrs/day, 7days/wk). Redesigned code was less than 500 lines. Mentored the staff on Python best design & development practices and assisted them with abstract and otherwise unsolvable design issues.

Provided code recommendations to ensure recommended design structure across different projects. Conducted training training events and designed training documentation to assist the staff in getting up to speed with Python and associated libraries. Managed Puppet deployments for system versioning. Contract canceled after staff reorganization downsizing. Senior Information Security Engineer CBTS/Advanced Cyber Security - Cincinnati, OH April 2014 to March 2015 subsidiary to design a secure communications system to allow clients and remote devices to send & receive secure data while providing no route from the Internet to the secure data. Assessed that the existing system with ZeroMQ would not allow for deploying server clusters and processing the data quickly. Utilized Pyramid and BRO IDS to use HTTP communications to create a 3 server solution to transfer, process, retrieve and send out data. Each cluster was created as an independent entity on the network and could be easily replicated as traffic needs required. Created custom event handlers in BRO to permit specific handling of each type of data. Developed a secondary and tertiary heartbeating system to run along side the load balancer to monitor each cluster's health, load and availability. Serialized data with JSON and Base64 to ensure data integrity while transmitting JSON, HTTP Headers, etc through the cluster. Upgraded the entire system from Python 2.7 to 3.4, including modifying the serialization methods. Developed a Proof of Concept way to use RSA Token security for remote devices to safely authenticate. Designed custom endpoints for traffic flows. Worked with Couchbase data store for data storage & retrieval. Assisted various team members to ensure their respective projects would work seamlessly through the communications system. 100% Remote position. Owner, Lead Artist Meadowlands Art Studio - Bridgewater, NJ January 2013 to March 2014 Attempted to launch a 3D Printed Toy company, creating toys and buildings for train sets, entirely made in the USA. Utilized my Python expertise and knowledge of Project Management to develop streamlined production methods. Created a 3D model slicer entirely in Python. Idea furloughed due to a dramatic drop in competitor pricing (and their products made in China). Senior Application Developer Usatoday.com - Tysons Corner, VA September 2010 to December 2012 I provided my Python, Django and MySQL expertise to contracts across the USA and Europe, including: Gannett Digital/Usatoday.com, Tyson's Corner, VA Data Architect, Python Developer

Developed Python & Django code for their massive Usatoday.com website relaunch. Designed a multi-server image resizing algorithm with PIL to support on-the-fly image manipulation for display across multiple news articles. Defined custom Context Processors, Template Tags & Template Filters based on page requirements. Compared speed advantages of NoSQL & MongoDB alternatives to the main Oracle database. Devised numerous Unit tests to ensure the valid operation of new code. Created custom REST APIs through the AWS Cloud to allow developers to interact with secured internal databases.   Transaction Network Services Inc, Reston, VA Technical Writer, Python Developer Provided around the clock support to a mission critical Python data transfer and import system for a new Europe-wide billing system that suffered from less than 70% uptime. Provided management with various alternatives for upgrading the code to a more stable version. Refactored and streamlined the code for the Celery task system and AMQP messaging queues to restore uptime to over 99%.   Moffitt Cancer Center, Tampa, FL Application Developer Upgraded their proprietary Rapid Application Deployment system for Report Generation written entirely in Django. Worked directly with Oracle Developers to develop custom database table Views to reduce processor loads, to create custom PL/SQL scripts for manipulating data on the databases before dumping into JSON endpoints and to ensure Django South would operate within Corporate & HIPAA specifications.   Callinectes Marine Research, Pompano Beach, FL Python Developer Created an open-source data analysis and data modeling system to reduce costs from Mathematica licensing. Developed a chart generator through PIL and Google Charts for their various research requirements. Created extensive Python Unit Tests to ensure 100% accuracy of the new math formulae.   Budget Travel Magazine, New York, NY Python Developer Contracted to assist with a website migration from an antiquated CMS into Django on the Amazon AWS Cloud. Refactored various Python database management applications to run up to 96% faster. Developed the Customer Registration, Location Taxonomy, and SSO integration systems. Owner, Python Developer Modular Programming Systems Inc - Jersey City, NJ January 2006 to August 2010 Grew the company into a full-service Web Development & IT support company. Managed 12 staff across 3 departments and up to 6 simultaneous web development projects. Over 50 projects managed

including 8 projects with budgets over $1 Million. Projects included Asset Tracking, Payroll systems and E-commerce storefronts. Co-owner, Importer/Exporter Auria Trading Company - Frankfurt a. M, DE September 2004 to December 2005 Started a new Import/Export company in Germany to capitalize on the increasing popularity of Chinese products in Europe. Cut through the red-tape of starting a dual-location German & American company, researched the Import tariff and customs regulations and developed contracts with shipping companies. Web Developer, Network Engineer Global Marketing Technologies - Amsterdam, NL January 2002 to August 2004 Helped to expand the company into more lucrative networking contracts. Designed RFP Proposals for Meshed city-wide WiFi for the city of Amsterdam and Satellite internet for the country of Nigeria. Linux Server Administration and PC Help Desk Disaster Recovery and Prevention January 1990 to December 2001 Provided IT Networking, Disaster Recovery and Prevention, Linux Server Administration and PC Help Desk support to clients throughout the USA. Education BS Computer-Systems Engineering Boston University - Boston, MA September 1995 to May 1997 High school or equivalent in Honors Diploma Crespi Carmelite HS - Encino, CA September 1991 to June 1995 Skills Django, Git, Json, Python, Flask, Visio, Xml, Splunk, Database, Mysql, Postgresql, Sqlite, Cisco, Etl, Rest, Linux Additional Information Skill Set 12 years of Python, Pyramid, Django, Flask experience, with REST APIs, JSON, XML, ZMQ Message Queueing 20 years of database ETL experience in MySQL, MariaDB, PostgreSQL, and Sqlite 6 years of Network Engineering on Cisco products with BRO Intrusion Detection and Splunk 7 years of Project Management including 8 projects with budgets over $1 Million using Waterfall, Agile & Scrum 4 years of managing Personnel including hiring, mentoring, evaluations, cross-training, and budgeting 10 years of Git experience, 3 years of Subversion (SVN) 10 years of Technical Writing, APIs, User documentation, and Application Workflow diagramming in SVG & Visio 5 years of Linux & Window server and desktop support 7 years of 3D Printing expertise, creating new printers and designing custom slicing software 10+ years of experience servicing clients remotely throughout the US, Canada, Europe and Australia Developed 2 small businesses into profitable enterprises, each in less than 1 year (IT Services, Import/Export)

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