

PROFESSIONAL SUMMARY:

- Experienced **Software Engineer** with **Master** of Electrical Engineering and a demonstrated history of working in IT industry.
- Skilled in **Python**, Cloud Operations, TCP/IP stack, Network **Security**, IoT domain and **Software Defined Networking**.
- Knowledge and experience of complex software design for distributed systems in embedded networking projects.
- Experienced in Agile framework and **Scrum** Methodology.

PROFESSIONAL EXPERIENCE:**SOFTWARE ENGINEER - II**, ioTium Inc, Santa Clara, CA, USA.**October 2018 – Present**

- Design, develop and implement microservices architecture for **containerized** data processing and machine learning workloads on Linux VMs and edge devices with **Kubernetes** and Rancher for orchestration and VMWare IoT Pulse for device management in process control secure environment.
- Design develop and implemented **Simulators** for data generation and also data transfer tools to push the simulated data to the remote destinations such as Azure IoT, AWS GreenGrass, Google IoT using **MQTT/AMQP/HTTPS** protocols.
- Build software automation workflows for infrastructure monitoring and alerting by leveraging Python automation framework.
- **Initiated proposal** for using Industrial IoT as a platform service to provide predictive maintenance, OEE and optimizing spare parts efficiency in the equipment division by conducting customer site surveys and interviews.
- Work hand-in-hand with marketing, **customer success and Engineering** to understand the end user/customer requirements and translate them into **solutions**.
- Responsible for developing ioTium Edge services using GO (Backend Ninja), Python.
- Worked on Various Industrial IoT devices and Protocols such as **BACnet, Modbus, OPC**, RockWell PLC, Siemens S7-300 PLC,
- **Tech Stack**: Python, GoLang, Bash/Shell, C, **Kafka**, InfluxDB, Docker, Kubernetes, AWS, Azure, GCP, BitBucket, JIRA, Telit

SOFTWARE DEVELOPER (intern), OCTONIUS Inc, Palo Alto, CA, USA**May 2017 – October 2017**

- Responsible for Creating **voice integration** and VOIP Search Functionality.
- Experienced in integrating file transfer-based **Search Engine** along with Voice based search using Web-kit-speech Recognition API.
- Worked on **Machine Learning algorithm** to predict the user-based **recommendation** based on the pattern analysis.
- Responsible for designing a test framework to validate the code changes before deploying on production servers.
- Worked on **monitoring** the software patch, testing, bug analyzing and providing a fix collaborating with other developers.
- Write REST APIs, helper functions and test automation scripts for the internal **test automation** framework using JIRA and Python
- Engage with customers and **support** to solve production issues.
- **Tech Stack**: Python, Node.JS, MongoDB, PostgreSQL, CloudFormation, Rest API, Jenkins, Bitbucket, AWS, **Docker**.

IT Support (Student Assistant), San Jose State University, San Jose, CA, USA**February 2017 – May 2018**

- Maintained Cisco routers and switches, configured L2, L3 protocols on routers.
- Troubleshooted the routers (routing protocols) and switches (VLANs, STP), helped Students to resolve technical issues.
- Assist in modelling the site blueprints by taking into consideration the RF parameters and thus deploy the access points.
- Experienced **troubleshooting** network problems for LAN and Wireless communications and security issues.

SKILLS:**Programming Languages:** Python (*Advanced*), C, C++, PHP, Unix Shell/Bash Scripting, Go(Intermediate)**Protocols:** TCP/IP suite, UDP, RIP, OSPF, EIGRP, BGP, NAT, MPLS, VLAN, IPv4/v6, DHCP, DNS, STP, VTP, SNMP, ARP, HSRP, HTTP(S), SSL, AAA**Networking Tools:** Wireshark, Putty, NS2, GNS3, Scapy, VMware ESXi, V-center server, HyperTerminal, Cisco Packet Tracer**Data Science Tools:** Pandas, Numpy, Tableau, Scikit-Learn (sklearn), Scipy, TensorFlow, Matplotlib**Database:** MySQL, MongoDB, DynamoDB | **Frameworks:** Django, Flask | **Big Data Ecosystem:** Kafka, Spark**Machine Learning:** SVM, Naïve Bayes, Random Forest, Decision Tree, Linear regression, Logistic regression, Multi-Layer Perceptron, KNN**Knowledge:** Network Programming, Firewalls, Network Security, Cryptography, Deep Learning, **Data Structures and algorithms**, **OOPS**, Client & Server Architecture, **SDN & NFV**, Deep Learning, Microservices, Kernel Architecture, AES & DES Encryption, Multi-threading.**Cloud Platforms:** AWS-EC2, S3, EBS, VPC, RDS, Azure, IoT-Hub, **Kubernetes** | **CI/CD:** Puppet, Ansible, Chef, Jenkins, Splunk, Nagios**Certification:** **Cisco Certified Network Associate (CCNA CSC013315295)**, AWS Certified Developer, Certified Kubernetes Administrator (CKA)**ACADEMIC EXPERIENCE:**[Slack Bot for coursework info](#) - Slack API, **Python**, DynamoDB, Quepy, AWS Lambda, NLTK

- Built a question-answer chat bot against data stored in AWS **DynamoDB** and a Slack API.
- Defined **regular expressions** to match income natural language questions (**Lemmas**) using **NLTK** tagger.
- Configures AWS API gateways and deployed the **business logic** on **AWS Lambda** using Python-Lambda libraries.

[Predict Survival on the Titanic](#) – Machine Learning, Python, Jupyter Notebook, Sklearn

- Feature Engineering and data cleaning to handle non-numeric, missing and categorical values.
- Used **Support Vector Classifier** to train model and predict survival with an accuracy of 76%.

[Develop a Load Balancing Algorithm for SDN using POX controller](#) - **Python**, SDN, FloodLight Controller, Mininet, Floodlight

- Lead a team in developing and implementing a load balancing algorithm using **FloodLight** controller.
- Was involved in **debugging** and developing the load balancing code.

- Developed and Implemented Weighted **Round Robin** load balancing, Dijkstra algorithm and was developed using Python.
- [URLShorteningService](#) - **Python**, Django, SQL, Heroku, Phishtank API, Docker, HTML, CSS
- Used Django to make web service calls. Dockerize the application to deploy in Heroku.
 - Implemented Memcachier/Memcached to hold previous calls in memory thus increasing the performance when dealing with domain/urls already cached.
 - Implemented Indexing for Speedy retrieval, and duplicate checks to make sure URL is stored only one time.
- [Stateful Firewall Software](#) - **Python**, Wireshark, Virtual Environment, **IPtables**, Scapy, Shell scripting
- Basic Defence mechanism to drop malicious packets using the log file. Aim to deliver packet filtering, IP filtering, blocking Dos attacks and malicious website requests with minimum response time.

EDUCATION:

Master of Science (*Electrical Engineering with Computer Networks and Deep Learning*)

May 2018

San Jose State University, San Jose, CA, U.S.A

Bachelor of Technology (*Electronics and Computer Engineering*)

May 2016

VR Siddhartha Engineering College.