**Maheedhar Mandapati**

**Employer :- Michael Lobo**

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**Education**

University of South Carolina ,Columbia, SC

* College of Engineering and Computing
* Bachelor of Science in Computer Engineering Graduated May 2020

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| **Skills**   * Terraform * Ansible * Python * SQL/MySQL * Linux (debian variants) * Kibana * Typescript/Javascript * Jenkins * Docker / Kubernetes * XML * Java 8 * C/C++ (11/14) | * Ionic Framework * Node.js * HTML/CSS * MongoDB * React * Vue * Hadoop * HDFS * System Verilog * Kotlin | |  | | --- | | **Certifications**   * **AWS** Certified Cloud Practitioner * **AWS** Certified Solutions Architect Associate * **Azure** Fundamentals Certified | |
| **Professional Experience**  **Pike Corporation**  **(Python / AWS Devops Engineer )** Jun 2022 – Till date   * Followed agile methodology according to the sprint stories and completed the stories within the specific timelines. * Developed web applications using python language data structures, OOPS concepts, file handling, and frameworks such as Django and Rest API. * Code and bug fixes for production-related issues. * Involved in implementing test cases using unit test and mock frameworks. * Developed persistence logic using Python and developed business logic with the Django framework. * Involved in code reviews and code refactoring in the peer-to-peer review process and improve the performance, stability, and scalability of deliverables. * Integrate user-facing elements into applications. * Write, review, and maintain code primarily in the Git version control system and bug defect tracking tool Jira. * Design and develop CI/CD build process and pipelines using Jenkins. * Manage source control repository in GIT– controlling and monitoring Source code & create tags for builds. * Creation of new version-controlled branches, merging branches, resolving merge conflicts in Git. * Participated in the release cycle of the product which involves environments like Development, UAT and Production. * Create continuous integration/deployment by integrating and improving client infrastructure and building pipelines. * Configuring Jenkins with GIT and scheduled jobs using Poll SCM option. * Created and setup automated nightly build environment for Java projects using Maven and Jenkins. * Created and maintained documentation of build and release process and application configuration to comply with audit requirements and industry best practices. * Worked with Development Team Leads and testing team to establish a build schedule, execute software builds, and troubleshoot build failures, if any. * Designed and implemented automation deployment using Jenkins to promote major releases, monthly releases, and patches to preproduction environment. * Building the source code using Maven and integrate same on Jenkins. * Responsible for weekly and daily work checks and backups. * Perform code merges and product integration builds. * Manage merges between project branches and streams and advise developers regarding best practices. * Tracking artifacts build and deployment information on JFrog Artifactory. * Worked on containerization tool Docker to generate docker images for RC builds and push those images to docker Registry. * Deployment of application into different environments using Ansible Playbooks. * Perform code merges and product integration builds. * Launching Amazon EC2 Cloud Instances using Amazon Web Services (Linux/ Ubuntu) and configuring launched instances with respect to specific applications. * Implemented IAC (Infrastructure as a code) using cloud formation template for managing infrastructure easy, reliable, and rapid. * Written and implemented Templates for AWS infrastructure as a code using cloud formation templates to build test, staging and production environments. * Designed AWS Cloud Formation templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates. * Configured Elastic Load Balancers (ELB) with EC2 Auto Scaling groups. * AWS EC2 and Cloud watch services. CI/CD pipeline management through Jenkins. Automation of manual tasks using Shell scripting. * Created docker swarm cluster with AWS EC2 autoscaling instances for achieving high availability. * Used Kubernetes for cluster management that runs Docker containerized applications in a cluster of EC2 instances in Linux Environment. * Implemented Kubernetes to deploy scale, load balance, scale and manage Docker containers with multiple names spaced versions. * Created Clusters using Kubernetes and worked on creating many pods, replication controllers, services, deployments, labels, health checks and ingress by writing YAML files. * Scheduled, deployed, and managed container replicas onto a node cluster using Kubernetes. * Experienced in working in Data centers with 24X7 Production and On-Call Environments     **LexisNexis Risk Solutions (Python Developer/DevOps Engineer)** Aug 2021 - Jun 2022   * Developed web applications using Python language Data Structures, OOPS concepts, file handling and frameworks like FLASK and REST API. * Design and development of RDBMS using Cassandra. * Containerization and orchestration of micro services using Docker, Kubernetes, and Python web frameworks. * Design and develop CI/CD build process and pipelines using Jenkins. * Maven packaging and version upgrade to resolver jar vulnerabilities according to maven repository and FedRAMP requirements. * Configuration, Permission, Tools, Nodes, Clusters, Audit related issues using shell script, Python scripts, Docker, and Kubernetes according to FedRAMP certification. * Implementing logging, Auditability, security, and monitoring using Prometheus and Grafana. * Reviewing Developers code and bugfixes for production related issues. * Developed new framework using Python scripts to Automate CLI unit tests. * Followed agile methodology with daily scrum meetings. * Deployed project using Git & bitbucket version control system and bug defect tracking tool JIRA. * Responsible for Implementation, design, architecture, and support of cloud-based server and service solutions. * Managed multiple AWS accounts with multiple VPC’s for both production and non-prod where primary objectives included automation, build out, integration and cost control. * Responsible for using AWS Console and AWS CLI for deploying and operating AWS services specifically VPC, EC2, S3, EBS, IAM, ELB, Cloud Formation and Cloud Watch. * Installing, configuring, and troubleshooting on various Amazon images like Amazon Linux AMI, Ubuntu 12.x, 13.x, 14.x, 15.x by using AWS EC2 instance service. * Templated AWS infrastructure as a code using Terraform to build staging and production environments. * Created and managed multiple Instances of Apache Tomcat and deployed several test applications in those instances in QA environment. * Configured a VPC and provisioned EC2 instances, EBS in different availability zones. * Implemented and maintained the monitoring and alerting of production and corporate servers/storage using AWS Cloud Watch. * Setup and build AWS infrastructure various resources, VPC EC2, S3, IAM, EBS, Security Group, Auto Scaling, and RDS in CloudFormation JSON templates. * Creating Cloud Watch alerts for instance and using them in Auto Scaling launch configurations. * Analyze the fitment of using AWS inherent fault tolerant building blocks in application architecture. * Backing up the instances by taking snapshots of the required servers regularly. * Setting up and administering the DNS system in AWS using Route53. * Responsible for ensuring Continuous Delivery/Continuous Integration across all environments from UAT/TEST to Pre-Production and Production using Jenkins. * Responsible for performing tasks like Branching, Tagging, and Release Activities on Version Control Tools: SVN, GIT and migrated SVN into GIT. * Created images and stored them in the Docker containers and uploaded to the Docker hub. * Developed procedures to unify, streamline and automate application development and deployment procedures with Linux container technology using Docker. * Used ANT and MAVEN as build tools on Java, PHP projects for the development of build artifacts on the source code. * Proficient with container systems like docker and container orchestration like EC2 container Service, Kubernetes, worked with Terraform. * Installation and setting up Kubernetes cluster on AWS manually from scratch. * Developed scripts using BASH files for Automation of activities and builds. * Using Jenkin AWS code deploy plugin to deploy to AWS. * infrastructure as code using tools like Ansible and terraform on Cloud Infrastructure using AWS and on-premises virtualization using VMWare. * Configured plugins for the integration tools to the version control tools. * Responsible for Continuous Integration (CI) and Continuous Delivery (CD) process implementation-using Jenkins along with Python and Shell scripts to automate routine jobs. * Managed SVN repositories for branching, merging, and tagging and developing Shell/Groovy Scripts for automation purposes. * Involved in design, implementation and modifying the Python code. * Configuring network services such as DNS/NFS/NIS/NTP for UNIX/Linux Servers and setting up UNIX/Linux environments for various applications. * Developed Python and shell scripts for automation of the build and release process. * Worked with Cloud Migrations to IAAS Platforms like AWS.   **Automatic Data Processing (ADP)**  **Python Developer/Devops Engineer** Dec 2017 – Aug 2021   * Developed frontend and backend modules using Python on Django including Tastypie Web Framework using Git. * Developed Merge jobs in Python to extract and load data into MySQL database and Worked on MYSQL data lineage process to map source to target DB, table and column mappings using OO Python. * Leaded Kubernetes charts using Helm. Created reproducible builds of the Kubernetes applications, Kubernetes manifest files and releases of Helm packages. * Front-end web development using HTML/CSS, JQuery, Bootstrap as well as back-end development using Golang and SQL. * Defined AWS Lambda functions for making changes to Amazon S3 buckets and updating Amazon Dynamo DB table. * Used Docker in Environment variables, Configuration files, Option types and Strings & integers. * Written Programs in Spark using Scala and Python for Data quality check. * Managed large datasets using Panda data frames and PostgreSQL. * Designed and developed data management system using PostgreSQL. * Developed server-side application to interact with database using Spring Boot and Hibernate * Experienced in building a Command line tool to interact with RESTful API using in Golang. * Used Rest Controller in spring framework to create RESTful Web services and JSON objects for communication. * Extracted data from the databases (Oracle and SQL Server, DB2, FLAT FILES) using Informatica to load it into a single data warehouse repository. * Developed REST APIs using Scala, Play framework and Akka. * Used Scala Test for writing test cases and coordinated with QA team on end to end testing. * Developed REST APIs using Scala and Play framework to retrieve processed data from Cassandra database. * Involved in converting Hive/SQL queries into Spark transformations using Spark RDD, Scala and Python. * Migrated an existing on-premises application to AWS. Used AWS services like EC2 and S3 for small data sets processing and storage, Experienced in Maintaining the Hadoop cluster on AWS EMR. * Developed backend modules using Laravel. * Write documentation for system administration and cloud administration audiences as well as REST API consumers at docs.openstack.org. * Automate Datadog Dashboards with the stack through Terraform Scripts. * Hands on experience in implementing containerization platform using Docker and Kubernetes. * Develop applications that use MongoDB database, and pymongo. * Designed front end using UI, HTML, Bootstrap, Node JS, underscore JS, Angular JS CSS, and JavaScript and Strong Expertise in working with server-side technologies including databases, restful API and MVC design patterns. * Developed front-end using Html, CSS, JavaScript, React, Redux, and Bootstrap. * Create develop and test environments of different applications by provisioning Kubernetes clusters on AWS using Docker, Ansible, and Terraform * Implemented map StatetoProps, map Dispatch toProps for the interactions between Redux and React. * Developing applications using RESTFUL architecture using Node.js and PHP as backend languages and Used NumPy for Numerical analysis and Used Spring Framework to support the Hibernate tool and Struts. * Build all database mapping classes using Django models and Apache Cassandra and Experienced in developing Restful applications with HATEOAS and documenting the API in Swagger. * Used Spark streaming using Python, Pytest, Selenium, Pyspark and Spark Big data for calculating similarity and diff of documents in Terraform. * **Environment**: Python 3, Django, SQL, ZODB, MySQL, Sqlite3, Git, Devops, PostgreSQL,NoSQL,Yaml, MongoDB Golang, bit bucket, pdb, AWS, Jira, Jenkins, Dockers, Pyspark, Rest, Virtual Machine, Ajax, jQuery, JavaScript, LINUX., AWS Auto Scaling, Maven, Jenkins, Gitlab, Unix/Linux, Shell scripting, Git version Control   **University of South Carolina, Department of Computer Science and Engineering**  **Volunteer Research Assistant** October 2017 - May 2019   * Designed an experiment to Test IoT device vulnerabilities across a wired local IoT network. * Parsed through the source code for the mirai virus and manipulated it to be able to safely run testing. * Setup multiple Raspberry Pi computers on an IoT LAN and infected one of them with the mirai virus. * Used Wireshark to monitor how the virus disseminates through the network. * Theorized potential solutions to these vulnerabilities observed in the experiment.   **Projects**   * Hybrid web app built using the Ionic Framework, built on Angular.   + Designed the structure of the backend, specifically Firebase integration.   + Built the necessary objects for proper firebase storage and retrieval.   + Integrated Cordova native libraries to use native functionality like the camera for QR code scanning.   + Made revisions to HTML, SCSS files to clean up the app pages.   + Helped team members implement the necessary functionality to read from and write to the backend.   + Integrated 3rd party APIs to use simple functionality of various social media apps. * Programmed iRoomba Vacuum Robot from scratch   + Used Python to write an interface that simplifies serial communication with a iRoomba robot.   + Used the interface to program the robot to follow a wall at a given distance.   + Developed a program that would dock the robot and charge it, whenever it detects a dock. * Programmed Embedded Systems for more efficient Video Rendering   + Programmed the Cyclone IV FPGA Board using C and SystemVerilog.   + Tested floating point vs fixed point logic to determine the advantage of fixed point arithmetic.   + Implemented a fractal drawing program using multiple fixed point cores to determine how parallelizable the program was.   + Used SystemVerilog to implement a basic ALU.   + Built a basic MIPS CPU around the ALU that can take actual MIPS instructions and run them.   + Used ModelSim software to simulate all SystemVerilog Designs to check correct functionality. | | |
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