**Khaleem Shaik**

**Sr. Python Automation Engineer**

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**SUMMARY:**

* Around 6 years of experience in application software development with emphasis on Object Oriented Concepts, Multi-tier, Client/Server, and Web-based Systems using Web technologies
* Experience in developing web-based applications using **Python 3.x/2.7, Flask.**
* Involved in the requirements gathering, analysis, design, development, and testing phases of the **Software Development Lifecycle (SDLC).**
* Experienced with designing and implementing various server-less, fully managed cloud services including **S3, Lambda, Cloud Watch, API Gateway, Athena, SES, SNS, SQS Step Functions, Cloud Watch, Event Bridge, Glue, Kinesis Firehose,** and **DynamoDB.**
* Extensive experience in JAVA/J2EE technologies like core JAVA, Servlets, JSP, JSTL, JDBC, Hibernate, Spring, Struts, Web services, JMS, multi threading, MVC architecture and design patterns.
* Experienced with initializing and configuring various AWS **EC2** instances environments including **Windows Server, Ubuntu,** and **Bitnami**
* As a part of the Email routing team, has intermediate experience in writing scripts in Sieve/lua for email scanning and monitoring.
* Experience with **virtualization** technologies like Installing, Configuring, and Administering Vmware **ESX/ESXi**.
* Experience with Hyland **OnBase**, including performing various administrative and development tasks.
* Worked in automation, setup and administration of build and deployment **CI/CD** tools such as Jenkins, and Udeploy/Ucode and integrated with build automation tools like ANT, Maven, Gradle, Bamboo, JIRA, bitbucket for building of deployable artifacts (JAR, WAR and EAR, and EXE) from source code.
* Development of **REST micro services** utilizing Java, Maven, Eclipse, Query DSL, Elasticsearch to query indices and attain json objects, utilize them in rendering mapping features on the ArcGIS for JS 4.3.
* Experienced in **WAMP** (Windows, Apache, MySQL, and Python) and **LAMP** (Linux, Apache, MySQL, and Python) Architecture and wrote Automation test cases using **Selenium** Web Driver, Junit and Spring.
* Experienced with Django object-relational mapping (**ORM**) and effectively utilizing various database types including **MySQL, Oracle PL/SQL, SQLite3, AWS Aurora, and DynamoDB**.
* Proficient with both **NoSQL** and **relational databases**, including MongoDB, AWS DynamoDB, Datastax, Redis, Apache Cassandra, and Hbase, as well as **RDBMS** technologies like Oracle, MySQL, MSSQL, SQL Server, and Hadoop. Experienced in writing Terraform templates and using advanced SQL features such as stored procedures, triggers, and views.
* Experienced with **Docker** containers for creating images deployed on AWS as **microservices**, as well as managing local deployments in **Kubernetes** by creating clusters and deploying application containers.

Proficient in container orchestration systems including AWS ECS, Kubernetes, and Docker Swarm.

* Experienced in developing end to end automation using Selenium WebDriver/RC/IDE/Grid, Unittest/Pytest, Jenkins, GHERKIN/Cucumber, Robot, Allure reporting, RESTful API and PostMan.
* Proficient in **front-end development** with strong expertise in HTML, CSS, JavaScript, TypeScript, Angular, Node.js, Bootstrap.js, Backbone.js, and XML.
* Expertise in establishing database connections for **Python** by configuring packages like **JDBC, and MySQL-Python**.
* Experienced of software development in python (libraries used: numpy, scipy, Matplotlib, python-twitter, Pandas data frame, network, urllib2, Mysql dB for database connectivity) and IDEs- sublime text, Spyder, pycharm, emacs.
* Experience with **Test Driven Development (TDD), Agile, Scrum and Waterfall** methodologies. Used ticketing systems like **JIRA, Bugzilla** and other proprietary tools.
* Set up databases in **AWS using RDS**, storage using the **S3 bucket**, and configuring instance backups to the S3 bucket.
* Experience with **Snowflake** Cloud data warehouse and AWS S3 bucket for integrating data from multiple source systems which include loading nested JSON formatted data into a snowflake table.
* Excellent knowledge of **Python** engineering under **Linux OS (Debian, Ubuntu, SUSE Linux, Red Hat Linux, Fedora).**
* Extensive experience in web application using **UI** design **HTML5, CSS3, JavaScript, AJAX, JQuery, Bootstrap, Angular.JS Node.Js, D3.js, W3C, React.js, Backbone.Js,** Web that follows **W3C Web Standards** and are browser compatible.
* Experience in **AngularJS** pattern in application development. Creating style guides, and best practices and setting **UI standards** for enterprise/consumer applications.
* Experienced in a **Python-based** environment, along with data analytics, data wrangling, and Excel data extracts.
* Worked on **Service Oriented Architecture (SOA)** and web services which use **REST and SOAP.**

**Technical Skills:**

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| *Languages* | Python, SQL, JavaScript |
| *Python Libraries* | Pandas, Flask, PyPdf2, boto3, selenium, gensim word2vec and doc2vec, NLTK, Fuzzywuzzy,scikit-learn,pil,BeautifulSoup,Numpy,Pandas,Matplotlib, pymsteams webhook, Pyqt, cx\_Oracle, SQLAlchemy, PyAutoGui...etc. |
| Databases | SQL Server, Oracle, PostgreSQL, MongoDB, MySQL, Hbase, SQLite |
| CI/CD | Git, Docker, Kubernetes |
| Cloud | AWS, Google Cloud, Azure, Oracle Cloud |
| Operating Systems | Linux, Windows |
| Others | Jupyter Notebook, Spyder, Eclipse, Terraform, PyCharm, Anaconda, Atom, Visual Studio Code, GIT, Kubernete, Jenkins, Tableau, Spotfire, Power BI,  Alteryx |

**Professional Experience:**

**Meta, Atlanta, GA Nov 2022 – Till Date**

**Role: Sr. Python Automation Engineer/AWS Developer**

**Responsibilities:**

* Developed user-friendly website interfaces using **Django** view controllers and templating language. Utilized Python for various tasks including writing data into JSON files for testing, creating scripts for data modeling, and handling data import and export.
* Used **Apache Couchdb** (NoSQL) in AWS Linux instance in parallel to RDS MySQL to store and analyze job market info.
* Hands-on experience with **Microsoft Azure**, including integrating Azure with Python for secure data storage and implemented data and storage management solutions using Azure SQL, Azure Files, Queue Storage, and Blob Storage. Experienced with Azure Data Lake Storage Gen1 and Gen2, Azure Data Factory, and other Azure services.
* Worked on **AWS Elastic** Beanstalk for fast deploying various applications developed **with Java, PHP, Node.js, and Python** on familiar servers such as **Apache**.
* Set up and built **AWS** infrastructure with various services available by writing cloud formation templates in **JSON.**
* Extensive experience in developing web applications using Python, Django, Flask, Pyramid, Sanic frameworks. worked with several python libraries including **Beautiful soup, Twisted, NumPy, matplotlib, SciPy, PyQt, Scapy, SQLAlchemy, Boto, logging, Nose, Blaze, Hug.**
* Implemented **SQLAlchemyas ORM** mapping tool for complete access and Wrote SQL queries and maintained PostgreSQL RDBMS in the local development environment.
* Good experience in developing web applications implementing MVT/MVC architecture using Django, Flask, Webapp2and spring web application frameworks, with good understanding of Django ORM and SQLAlchemy.
* Worked on Javascript MVC Framework like AngularJS and BASH scripting. Python/BASH scripting for automation and monitoring system processes. Developed web services using Restful technology to support JSON and XML.
* Developed and maintained the continuous integration and deployment systems using Jenkins, Nexus, ANT, Akka and MAVEN.
* Maven tool has been used for the build and deploy procedure scripts in UNIX, Linux and Windows environments using Hudson.
* Played a key role in installation and configuration of the various Hadoop ecosystem tools such as Soir, Pig, Hbase and Cassandra.
* Installed VMware ESX server 4.1/4.0 and created virtual machines on ESX servers. Created standard templates and deployed virtual machines from these templates.
* Built a robust automation framework using **Paramiko and Netmiko** for remote configuration of network devices.
* Created a server automation framework that utilized **Paramiko** to execute configuration scripts on remote servers, cutting deployment time by 60%.
* Developed Scala scripts, UDFFs using PySpark, Data frames/SQL and RDD/MapReduce in Spark 1.3 for data aggregation, queries and writing data into OLTP system directly or through sqoop.
* Completed data extraction, aggregation and analysis in HDFS by using **PySpark** and storing the data needed to Hive.
* Developed and maintained data warehouse models in **Snowflake** for over 100 datasets using WhereScape, including building and modifying logical and physical data models. Created detailed reports in Looker based on Snowflake data connections.
* Wrote Powershell scripting for task automation and to schedule tasks.
* Used Python and REST APIs to ingest data from external sources into BigQuery. Developed a Python program with Apache Beam and executed it in Cloud Dataflow for data validation between raw source files and BigQuery.
* Developed applications using Eclipse SDK and deployed them on Tomcat Server. Built applications utilizing Couchbase Server through the Couchbase Python SDK.
* Designed and implemented a configurable data delivery pipeline for scheduled updates to customer facing data stores built with Python, Apache Airflow, Elasticsearch, MySQL, and PostgreSQL running in AWS HybridCloud. The data delivery pipeline is responsible for loading all customer facing data products.
* Implemented **Cloud** Trail in order to capture the events related to **API** calls made to **AWS** infrastructure.
* Worked on **AWS CLI Auto Scaling and CloudWatch** Monitoring creation and update.
* Allotted permissions, policies, and roles to users and groups using **AWS** Identity and Access Management **(IAM)**
* End-to-end solution for hosting the web application on AWS cloud with integration to **S3 buckets**. Managing **AWS** Infra and automation with **CLI, API.**
* Extensive experience in front-end development using **HTML, CSS, JavaScript, AJAX, jQuery, Bootstrap, AngularJS, React.js, Node.js, Backbone.js, and D3.js.** Developed UI and internal applications with these technologies, including handling JSON data with jQuery and Ajax. Designed and implemented nested views and form validations using AngularJS UI Routing and reusable directives. Proficient in managing large datasets with pandas and MySQL.
* Implemented database schemas using **SQLAlchemy** for a high-traffic web application, optimizing query performance by 30%.
* Experienced in Agile methodologies and Scrum, with a background in Python-based data analytics and MySQL data management systems.
* Maintained and developed Docker images for a tech stack including **Cassandra, Kafka, Apache**, and several in house written java services running in Google Cloud Platform (GCP) on Kubernetes.
* Developed analytical components using Scala and KAFKA.
* Experienced with Informatica Data Quality (IDQ) and PowerCenter, including data cleaning, profiling, quality measurement, and validation. Skilled in developing complex mappings and transformations using PowerCenter and IDQ.
* Performed bug tracking and Unit Testing using **JUnit, TestNG, and FindBugs.**
* Containerized **TVE** Environment using Docker and shell scripts for rapid deployment and environment creation. Contributor to **Vagrant and Docker** applications for vulnerability testing purposes.
* Worked on Public Cloud Comparison including Features, Price, and benefits between **AWS and Azure** for a **Microservice Java** project using **Docker** Containers.
* Responsible for setting up the Python **REST API** framework using **Django**.
* Worked on creating and documenting POC for helping migrate the current application to micro service architecture. The architecture included **Docker** as the container technology with Kubernetes and worked on with **REST API**.
* Used **Python**-based **GUI** components for the front-end functionality such as selection criteria.
* Worked on data transition programs from **DynamoDB** to **AWS Redshift** (ETL Process) using **AWS Lambda** by creating functions in Python.
* Experienced in business forecasting, segmentation analysis, and data mining. Skilled in transforming business requirements into analytical models, designing algorithms, and developing scalable data mining and reporting solutions.
* Created **Business Logic** using **Python** to create Planning and Tracking functions.
* Developed a multi-threaded standalone app in **Python and PHP** to view the performance.
* Conducted data blending, data preparation using SQL for Tableau consumption and publishing dashboard to Tableau server.
* Developed **Tableau** data visualization using Cross table, Heat maps, Box and Whisker charts, Scatter plots, Geographic Maps, Pie charts, Donut charts, Bar Charts, and Density charts.
* Created one-step installations, rolling upgrades, and rollback processes for servers using Puppet and shell scripts. Wrote Python scripts to parse XML documents and integrate variables with Puppet scripts.
* Developed a Python program with Apache Beam for data validation between raw files and BigQuery, and used Google Cloud Functions to load CSV files into BigQuery from a GCS bucket.
* Used **Apache CXF as the Web Services** framework to implement the **REST APIs involved.**
* Proficiently used custom **AngularJS Filter,** Directive, and Service to achieve the various functionalities of the website. Worked on building views using **AngularJS** and followed the MVVM pattern.
* Used **GIT** as a repository, **GitHub, and Jenkins** to build and deploy the project into the Fuse server.

**Environment:** Python, Django, Shell Scripting, AWS, Azure Cloud, Pandas, PyQt, PyQuery, Flash, HTML, CSS, Javascript, Node.Js, Angular.Js, React.js, ASP.NET 4.6, AJAX, Oracle, MongoDB, MySQL, JDBC, Git, Github, Rest, SOAP, WebServices, Selenium, UML, Eclipse, Junit, Itext, Subversion, Agile, Terraform, Web, SOA.

**AT&T, Atlanta, GA Jan 2022 – Oct 2022**

**Role: Sr. Python Automation Engineer/AWS Developer**

**Responsibilities:**

* Experience in setting up the life cycle policies to back the data from **AWS S3 to AWS Glacier**, Worked with various **AWS, EC2, and S3 CLI tools**.
* Responsible for delivering datasets from Snowflake to One Lake Data Warehouse and built CI/CD pipeline using **Jenkins** and **AWS lambda** and Importing data from **DynamoDB** to Redshift in Batches using Amazon Batch using TWS scheduler.
* Design and implement remote upgrade systems mostly in Clojure and Deploy and monitor scalable infrastructure on Amazon web services (AWS) and configuration management using puppet.
* Automated remote server maintenance tasks using **Paramiko**, reducing manual intervention by 70%.
* Developed Python scripts for **secure file transfers** (SFTP) and remote command execution over **SSH.**
* Implemented key-based authentication systems to enhance security and simplify server access for automated jobs.
* Configured and managed large-scale server clusters, leveraging **Paramiko** for dynamic provisioning and monitoring.
* Gathered requirements and business artifacts through stakeholder interactions using Agile SCRUM methodology and managed projects with JIRA.
* Used **Blaze Ecosystem, SQLAlchemy** to operate across various databases.
* Designed and maintained databases using Python and developed Python based API (RESTful Web Service) using **Flask-SQLAlchemy** with Oracle database.
* Process and load bound and unbound data from Google pub/sub topic to Bigquery using cloud Dataflow with python.
* Created Datadog dashboards for real-time and historical metrics, and set up system alerts to notify application teams based on an escalation matrix.
* Implemented cluster services using Docker and **Azure Kubernetes Service** (AKS), managed local deployments with a self-hosted Kubernetes cluster via Jenkins CI/CD, and configured Istio for node-to-node encryption and secure microservices communication on AKS.
* Point team player on openshift for creating new projects, services for load balancing and adding them to Routes to be accessible from outside, troubleshooting pods through ssh and logs, modification of buildconfigs, templates, imagestreams, etc
* Managing the Openshift cluster that includes scaling up and down the AWS app nodes.
* Translate business logic from various systems, such as Microsoft Excel, on-premise SQL servers, and cloud (Microsoft Azure) SQL Database into Alteryx in a quick and accurate manner.
* Troubleshoot data issues, providing support within internal systems, for Python scripts, Alteryx workflows and Tableau dashboards.
* Designed and developed ETL jobs to extract data from Salesforce replica and load it in data mart in Amazon Redshift and managed Amazon Redshift clusters such as launching the cluster by specifying the nodes and performing the data analysis queries.
* Designed and Developed Oracle PL/SQL and shell scripts, Data Import/Export, Data conversions and Data cleaning and worked on Spring Framework applications and did integration to Microservices into existing system architecture.
* Development of **Python APIs** to dump the array structures in the Processor at the failure point for debugging. Wrote Python scripts to parse **XML** documents and load the data in the database.
* Worked on converting our product from an on-premise to a cloud-based application. In this process, I was working with **Node.js and CouchDB** which is replacing our Liferay and **Tomcat code**.
* Managed database connectivity, session handling, and **ORM mappings**, ensuring seamless interaction between application and database layers.
* Spearheaded the development of a cloud-based data warehouse, leveraging **SQLAlchemy** to streamline ORM functionalities across multi-tenant systems.
* Implementing a Continuous Delivery framework using **Jenkins, Jfrog, Maven & Nexus in Linux** Environment. Using **Jenkins AWS Code Deploy** plug-in to deploy into **AWS.**
* Trained staff on effective use of **Jenkins, Docker, GitLab and Kubernetes**.
* End-to-end solution for hosting the web application on **AWS cloud** with integration to **S3 buckets**. Managing **AWS** Infra and automation with **CLI, API.**
* Worked on developing Restful endpoints to cache application specific data in in-memory data clusters like REDIS and exposed them with Restful endpoints.
* Used Redis cache for high performance, which creates space for new data by removing old data.
* Used **NODE.JS** and written **node.JS** application in **JavaScript** and can be run within the **node.JS** runtime.
* Designed **UML** class diagram, sequence diagram, use case diagram, and coding for backend using **Java.**
* Worked with **Terraform** for automating VPCs, VLBs and Security groups.
* Involved in debugging the product using **Eclipse and JIRA Bug Tracking**.
* Data modeling using Database development skills with **Hadoop, Big data, Cassandra, NoSQL, MongoDB, JDBC, DB2, CRUD MongoDB, Oracle, MySQL.**
* Worked on **Hadoop, Big data, MySQL** Databases, and hands-on work experience in writing applications on NoSQL databases like **Cassandra and MongoDB.**
* Consume Rest Web Services consuming **HTTP** clients and use Jersey implementation to produce Rest.
* Developed **PL/SQL** packages, procedures, triggers, functions, and indexes to implement business logic.
* Administered both **Git** and Subversion repositories for an enterprise code off.
* Developed test cases and performed unit tests using the **JUnit** Framework.
* Designed the **UML**, created class, and sequential diagrams using Borland Together, and modified code.

**Environment:** Python, Django, Shell Scripting, AWS, Javascript, Node.Js, Bootstrap.Js, Angular.Js,

Backbone.Js, CSS, HTML5, JSP, JDBC, Hadoop, Big data, Cassandra, NoSQL, MongoDB, MySQL, MS SQL, Soap, Web Services, REST, SOAP, APACHE CXF, Eclipse, Junit, Jira, GIT, GITHUB, Subversion (SVN), Maven, SOA, JMS, Tomcat, Linux

**MakeMyTrip, Gurgaon, India Jun 2019 – Nov 2021**

**Role: Software Engineer**

**Responsibilities:**

* Created network architecture on **AWS VPC, subnets, Internet Gateway, Route. Perform S3 buckets creation,** configured the storage on **S3 buckets**, policies, and the **IAM role-based policies.**
* Used Cloud-watch for monitoring **AWS cloud** resources and the applications that deployed on **AWS** by creating new alarms, and enabling notification service.
* Developed **Restful** Microservices and deployed them on **AWS API Gateway.**
* Worked on **Git, REST API,** and **Aurora Postgresql.**
* Developed **Azure DevOps CI/CD** pipeline for deploying the code.
* Architectural and detailed position, PnL, and FICC data migration process from multiple sources into Snowflake and vertica from Sybase- IQ, SQL server, and Oracle.
* Created Mock Data using **Pandas Pyarrow** and some other external libraries in **Python** fortesting in sandbox and non-prod systems**.**
* Managed and trained peers on the installation of **MYSQL** and in writing queries to achieve performance optimization.
* Wrote Python modules to extract/load asset data from the **MySQL** source database.

**Environment:** Python, AWS, Flask, MySQL, Eclipse, HTML, Git, CSS, PHP, Jira, MySQL, AuroraPostgresql, Cassandra, Dockers.

**Paper Boat (Hector Beverages), Gurgaon, India Apr 2018 – May 2019**

**Role: Jr. Software Developer**

**Responsibilities:**

* Designed a high availability environment for Application servers and database servers on **EC2** by using **ELB** and **Auto-scaling**.
* Designed high availability environments for application and database servers on EC2 using ELB and Autoscaling.
* Utilized AWS Import/Export for large data transfers; worked with S3 buckets and Lambda services.
* Designed Cassandra schemas for APIs; developed **RESTful microservices** using Flask and deployed on AWS.
* Developed and maintained applications using **DynamoDB and MySQL**.
* Created Docker images and managed Docker containers.
* Wrote Python modules for data extraction/loading from MySQL.
* Used Agile methodologies and Scrum in a Python-based environment; developed and tested features with Flask and front-end technologies.
* Managed development environments with **JIRA** and Stash/Git; developed full-stack applications with Python on Flask.

**Environment:** Python, Flask, AWS, Flask, MySQL, Linux, Flask, HTML, XHTML, Git, CSS, Bugzilla, JavaScript, Apache Web Server, DynamoDB, Apache spark, Cassandra, MySQL.

**Educational Skills:**

Masters of Science in Information Technology, Kennesaw State University, Kennesaw, GA.

Bachelor of Engineering in Electronics and Communication Engineering from Chandigarh University, Punjab, India.