**Surya**

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**SUMMARY:**

* Around 7 years of experience in Python development with different domains like medical, telecom and finance . Proficient in designing and developing Python, Django, and Flask projects with domains like
* Skilled in Django, Flask, and Pyramid web frameworks for developing web applications following the Model-View-Template architecture.
* Extensive experience in Python development with a specialization in the telecom domain, including real-time data processing, network monitoring, and telecom data integration.
* Experienced in utilizing various Python libraries including Beautiful Soup, NumPy, SciPy, matplotlib, Pandas, streamlit and more for data manipulation and visualization.
* Built interactive and data-driven web applications using Streamlit, enabling real-time data visualization and user interaction.
* Developed REST APIs using Django framework and utilized existing APIs for integration.
* Worked with both relational databases (MySQL, PostgreSQL) and NoSQL databases (MongoDB, Cassandra), as well as cloud data warehouses like Amazon Redshift and Snowflake.
* Extensive experience with AWS and Microsoft Azure cloud services including EC2, S3, RDS, Lambda, Glue, Azure Data Lake, etc.
* Experienced in data engineering tasks using Kafka, Pyspark for data transformation and analysis, and Spark SQL for loading data to Snowflake.
* Skilled in asynchronous programming using asyncio in Python.
* Utilized asyncio for asynchronous operations and Git for version control, supporting team collaboration in an Agile environment.
* Worked on data processing and transformations and actions in spark by using Python (Pyspark) language.
* Proficient in Docker containerization and Kubernetes(k8s) orchestration for deploying scalable applications.
* Implemented CI/CD pipelines using Jenkins for continuous integration and deployment automation.
* Hands-on experience in ETL processes using Informatica Power Center, AWS Glue, and pyspark.
* Knowledgeable in HTML, CSS, Bootstrap, and JavaScript for developing user interfaces.
* Experienced in developing test automation frameworks with Python scripting and Selenium for both manual and automated testing.
* Utilized TensorBoard for visualizing machine learning model performance, including metrics like accuracy, loss, and other key indicators.
* Worked on real-time data processing using Kafka pipelines, Apache Flink, Spark, and Hadoop clusters.
* Strong adherence to Python best practices (PEP-8), Agile methodologies, and version control systems like Git and SVN.
* Proficient in using Anaconda Navigator to launch and manage IDEs such as Jupyter Notebook, JupyterLab, Spyder, and Visual Studio Code.
* Implemented Agile practices using Jira, including Scrum and Kanban boards, to improve team collaboration and workflow efficiency.

**TECHNICAL SKILLS:**

Programming Languages: Python, Java, C, C#, SQL, PL/SQL.

Frameworks: Django, AngularJS, Django Rest Framework, Flask, FastApi

Databases: PostgreSQL, MySQL, Oracle, SQL Server, Sqlite3

Python Libraries: Pandas, NumPy, Beautiful Soup, Matplotlib, plotly, requests

Cloud Platforms: AWS, Azure

Platforms: Linux, Unix, Windows.

Version Control: Git, Github, SVN

Tools & IDE: Selenium, Eclipse, NetBeans, Visual Studio, Anaconda.

Operating systems: Windows, Linux, MacOs

**WORK EXPERIENCE:**

**Client: Mayo Clinic, Rochester, MN January 2023 – Till Date**

**Role: Sr. Python Developer**

**Responsibilities:**

* Developed views and templates with Python and Django's view controller and templating language to create a user-friendly website interface.
* Designed end-to-end application architecture using Python within Django Web Framework.
* Worked with View Sets in Django-REST framework for providing web services and consumed web services performing CRUD operations.
* Utilized Python Flask framework to build modular and maintainable applications.
* Developed Restful Microservices using Flask and Django and deployed on AWS servers using EBS and EC2.
* Created custom domain for API gateway and configured with VPC endpoint and load balancer.
* Created Athena and integrated with AWS glue to fully manage ETL service that can categorize the data.
* Involved in writing API for Amazon Lambda to manage some of the AWS services.
* Developed data transition programs from DynamoDB to AWS Redshift using AWS Lambda by creating functions in python.
* Designed AWS Cloud Formation templates to create custom sized VPC,subnets to ensure successful deployment of web applications.
* Implemented data processing and manipulation workflows using Pandas within Streamlit apps for efficient data handling and transformation.
* Integrated TensorBoard with TensorFlow workflows to streamline model development and evaluation processes.
* Build numerous Lambda functions using Python and automate the process using the event created.
* Involved in upgrading the present Oracle data model to Cassandra data model.
* Responsible for configuring NOSQL databases Mongo DB for increasing compatibility with django.
* Worked on MongoDB database concepts such as locking, transactions, indexes, schema design.
* Involved in testing, evaluation and troubleshooting of different NOSQL database systems and cluster configurations to ensure high availability in various crash scenarios.
* Implemented Docker containers for image creation and provisioning within Jenkins CI/CD pipelines.
* Designed serverless microservice ETL application with AWS lambda and S3 using AWS CDK.
* Developed automated testing framework for command-line-based tests on Linux using selenium-based tests using Python.
* Use Python unit and functional testing modules such as unit test, mock, and custom frameworks.
* Written test cases using pyunit and selenium automation testing for better manipulation of test scripts.
* Designed and developed the UI of the website using HTML, CSS, and JavaScript, also used Bootstrap as a mechanism to manage and organize the HTML page layout.
* Involved in gathering and documenting business requirements from end clients and translating them into report specifications for the MicroStrategy platform.
* Experienced on working with Docker for creating images that are deployed on AWS as Microservices and Experienced on managing the local deployments in Kubernetes(K8s) and creating local cluster and deploying application containers.
* Leveraged Anaconda's optimization tools to enhance the performance of Python code, ensuring efficient computation and resource management.
* Utilized Jira to manage project timelines, tasks, and milestones, ensuring projects stayed on track and within scope.

**Environment:** Python 3.7, Django, Flask, AWS, MongoDB, Pyspark, Docker, CSS, HTML, HTTP, JSON, NumPy, Pandas, REST, Sublime, PyCharm, Anaconda, XML, Pytest.

**Client: Wipro Technologies , Hyderabad India April 2019 – April 2022**

**Role: Sr. Python Developer**

**Responsibilities:**

* Participated in requirement gathering and worked closely with the architect in designing and modeling.
* Used Django configuration to manage URLs and application parameters.
* Developed backend and frontend modules using Python on Django Web Framework.
* Worked on Django ORM API to create and insert data into the tables and access the database.
* Developed and executed complex SQL queries to pull data from data sources like SQL server database, and Oracle.
* Designed and configured Oracle database and back end applications and programs. Developed elaborate Python scripts to migrate data from proprietary database to Oracle.
* Implemented code to perform CRUD operations on Mongo DB using PyMongo module.
* Implemented multiple high performance Mongo DB replica sets on EC2 with robust reliability.
* Deployed and managed NOSQL database clusters in production environments, ensuring high availability and fault tolerance.
* Hands-on experience in Rest APIs, AWS, Open Shift, Perl, BDDPL/SQL, Amazon Web Services AWS provisioning, and good knowledge of AWS services like EC2, S3, Redshift, VPC, Glacier, Bamboo, ELB (Load Balancers), RDS, SNS, SWF, and EBS etc. and Azure.
* Worked on creating the cloud formation scripts, setting up the VPC, EC2 instances, IAM modules.
* Migrated the data lake and Data Warehouse from HDFS and Hive to AWS S3 and Redshift.
* Developed CI/CD pipelines for Python microservices deployment using Jenkins.
* Used Django REST framework and integrated new and existing API endpoints
* Generated Python Django forms to record data of online users and used Pytest for writing test cases.
* Recorded the online users' data using Python Django forms and implemented test cases using Pytest.
* Developed a real-time data ingestion pipeline to process incoming Call Data Records (CDRs) from various telecom network switches.
* Utilized Apache Kafka to manage the stream of CDRs, ensuring the seamless and reliable transfer of telecom data.
* Loaded processed CDRs into Hive ORC tables, optimizing storage for fast querying and analysis.
* Enabled real-time analytics on call duration, frequency, and peak usage times, providing telecom operators with valuable insights.
* Responsible for extracting data from various flat files using SQL scripts and ETL, validate the data and load data into Datawarehouse.
* Developed reusable framework to be leveraged for future migrations that automates ETL from RDBMS systems to the Data Lake utilizing Spark Data Sources and Hive data objects.
* Managed Linux server environments, including installation, configuration and maintenance of system software and services.
* Used Linux command-Line utilities and tools for system monitoring, performance, optimization and security hardening.
* Developed dashboards using Streamlit to visualize telecom usage patterns, assisting in network optimization and capacity planning.
* Leveraged TensorBoard's capabilities for visualizing data distributions, histograms, and embeddings to gain insights into model behavior.
* Performed Data mapping between source systems to Target systems, logical data modeling, created class diagrams and ER diagrams, and used SQL queries to filter data
* Hand-on experience in Microsoft Azure cloud platform and merge with python.
* Experience with Docker containers and container orchestration systems such as Confidential ECS, Kubernetes(K8s) and Docker.
* Conducted extensive data analysis, visualization, and machine learning model development using Anaconda-supported tools like Pandas, NumPy, Matplotlib, Scikit-Learn, and TensorFlow.
* Generated detailed reports and dashboards in Jira to monitor project progress, team performance, and identify potential bottlenecks.

**Environment:** Python, Django, Bootstrap, libraries - (NumPy, SciPy, Pandas, PyCharm, PyQuery, Matplotlib), AWS, XML, Shell Scripting, MySQL, HTML, CSS, JavaScript, Jenkins, Linux, SQL Alchemy, MVC, Linux, HTML5, Kubernetes, Kafka, JSON, Apache Web Server, SQL, UNIX.

**Client: Motivity Labs, Hyderabad India July 2017 – March 2019**

**Role: Sr. Python Developer**

**Responsibilities:**

* Developed back-end components using Python 3.7 on Django framework and front-end using HTML5, CSS/CSS3, and JavaScript to improve responsiveness and performance of Web application.
* Developed views and templates with Django's MVT (model, view, and template) to create a user-friendly website.
* Built Web applications using Python, Django, HTML, and template languages.
* Developed entire frontend and backend modules using Python on Django Web Framework.
* Understanding of SQL queries and database management systems such as PostgreSQL.
* Installed data sources like SQL-Server, Cassandra, and remote servers using the Docker containers to provide the integrated testing environment for the ETL applications.
* Created ETL workflows to extract data from CRM applications and loaded into Oracle Datawarehouse.
* Writing Cloud templates using Python Scripts and deployed AZURE resources using it.
* Processed data ingestion using Spark APIs for loading data into data lakes and AWS S3.
* Used AWS to build cloud instances EC2,storage buckets S3, Redshift, Security groups to store files.
* Responsible for creating on demand tables on S3 files using Lambda functions and AWS Glue using python and spark.
* Used AWS glue catalog with crawler to get the data from S3 and perform sql query operations.
* Design and Developed Web Services, RESTful API's for Mobile Apps using Python Django-REST and Flask Frameworks on Nginx and Uwsgi servers
* Developed and executed White box test cases using Python, Unitest/Pytest/Robot framework.
* Provided ongoing maintenance, support, and enhancements in existing systems and platforms, bug fixing and tracking (JIRA), and managing new application modules.
* Developed tools using Python, PHP, and Shell scripting to automate.
* Responsible for Working with various Python-integrated development environments like PyCharm, and Idle.

**Environment:** Python, AWS, Linux, Kubernetes, Django, Rest, Flask, React, GitHub, HTML5/CSS , PostgreSQL, Amazon Web Service (AWS), S3, EC2, EBS, PyCharm, Microsoft Visual Code, Linux, Shell Scripting, JIRA.

**EDUCATION:**

**University of Texas at Arlington Jan 2022 – May 2023**

Master of Science in Data Science