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 **DINESH REDDY**

**Senior Python Developer**

**PROFESSIONAL PROFILE**

* Over **10 years** of professional experience as a **Python Developer** with a focus on designing, developing, and implementing **Python, Django client-server applications.**
* Experienced in various stages of **Software Development Life Cycle (SDLC)** from project definition to post-deployment documentation.
* Proficient in Design, code, debug, reporting, data analysis, & web applications using **Python** and **Django**.
* Skilled in implementing **Object-Oriented Python,** **Hash Tables** (Dictionaries) and **Multithreading, Django, MYSQL, Exception Handling,** and **Collections** using Python.
* Experienced in **OOP/functional coding** and Expertise in server-side templating languages, like **Jinja 2** and **Mako.**
* Strong understanding of **Python multi-threading,** multi-processing, and their limitations, along with maintaining and executing build scripts to automate development and production builds.
* Deep understanding of multi-process (define, design, and create) cloud architecture projects and the threading limitations of Python.
* Experienced in working with **MVC** frameworks **like Django, HTML, CSS, Bootstrap,** and proficient in using Python IDEs such as **Sublime Text,** **Visual Studio Code,** and **PyCharm.**
* Excelled in backend development with **Python** using the **Django, Flask,** and **Pyramid** frameworks, delivering scalable backend solutions and APIs that are up to date with the latest developments in the technical community.
* Designed custom **Django form widgets** and frontend assets to enhance reusability and follow DRY principles, utilizing **Python, Django, JavaScript,** and **Bootstrap 4.**
* Skilled in error and exception handling, debugging using **Sublime Text,** **PDB, Eclipse, Spyder, NetBeans,** and **Pycharm.**
* Familiarity with **ORM (Object Relational Mapper)** libraries and **Event-Driven Programming** in **Python** andhighly experienced in testing frameworks like **unit test, Pytest,** and **Bazel.**
* Skilled in writing **Python** scripts to parse **CSV** and **XML** documents and load the data in different resources/databases like **MYSQL** and **MongoDB.**
* Proficient in developing extension types using the **Python/C** interface and integration of popular scientific computing libraries like **NumPy,** **Pandas, Beautiful soup, Pytables, Matplotlib, Python-twitter, Pickle, urlib2, NLTK, OpenNLP, StanfordNLP, Scikit-Learn**, **SciPy and Statsmodels.**
* Experienced in **Unit testing/ Test-driven Development (TDD), Load Testing,** and proficient in automated testing concepts using **PyTest.**
* Created web applications using **WAMP** and **LAMP** architectures.
* Extensive knowledge and experience in **Hadoop/Big Data analytics tools** such as **HDFS, Hive, Pig, HBase, Sqoop, Flume, Map Reduce, Cassandra, Zookeeper, Airflow, Dag, Kafka, Spark, Spring Boot, YARN,** and **Oozie.**
* Skilled in designing data models using **Snowflake Schema** and **Star Schema** techniques for Data warehousing.
* Good knowledge of deploying applications in heterogeneous Application Servers such as **TOMCAT, Web Logic,** and **Oracle Application Server,** and enterprise communication framework **Kafka.**
* Proficient in working with **AWS** services such as **Amazon EC2, S3, VPC, CloudWatch, IAM, Kinesis, Glue, SNS, Athena, Redshift,** and **Route S3,** as well as GCP services like **Big Query, GCS Bucket, G-Cloud function, Cloud Dataflow, Pub/Sub, Cloud Shell, GSUTIL, BQ command line utilities, Data Proc,** and **Stackdriver.**
* Managed databases and **Azure Data Platform services** such as **Azure Data Lake (ADLS), Data Factory (ADF), Data Lake Analytics, Stream Analytics, Azure SQL DW,** and **HDInsight/Databricks** and **GCP.**
* Experience in working with different operating systems including **Windows, Linux (Ubuntu),** & **UNIX.**
* Experience in **UNIX/Linux** shell scripting for job scheduling, batch-job scheduling, automating batch programs, forking, and cloning jobs.
* Experienced in installing and administrating **CI/CD tools** like **Jenkin** and **Bamboo.**
* Familiar with fully automated continuous integration system using **Git, Jenkins, MySQL,** and custom tools developed in **Python** and **Bash.**
* Created test cases and test plans, developed automated testing frameworks, and worked with version control tools like **Git** and **Subversion.**
* Familiar working with containerization and orchestration technologies such as **Kubernetes, Docker Swarm,** and **Jenkins** for automating build infrastructure.
* Strong Knowledge on Testing tools such as **JIRA, Bugzilla,** and worked with automation tools like **Artifactory, Jenkins, Puppet,** and **SonarQube Chef.**
* Collaborating with the product engineering, UX, management teams on a constant basis.
* Excellent interpersonal and communication skills, efficient time management and organization skills, ability to handle multiple tasks and work well in a team environment.

**EDUCATION**

* Bachelors in **computer science and engineering** at Jawaharlal Nehru Technological University, Kakinada.

**TECHNICAL SKILLS**

* **Programming languages:** Python 3.x, 2.7, JavaScript, C++, SQL, Scala, Pyspark, Java, Perl.
* **Operating systems:** Windows, Linux, Mac OSX.
* **Frameworks:** Django, Flask-SQL Alchemy, AngularJS, NodeJS, Pyramid, web2Py.
* **Web Technologies:** HTML/HTML5, CSS/CSS3, jQuery, JSON, XML, AJAX, PHP, Bootstrap, DOM
* **Databases:** MySQL, SQL Server, NoSQL, Mongo DB, Redis, PostgreSQL, Oracle, Cassandra, SQLite.
* **Web servers:** Apache, WebSphere, Apache Tomcat.
* **Deployment Tools:** Heroku, Jenkins, Amazon EC2, Capistrano, Docker Swarm, Kubernetes.
* **Machine Learning algorithms:** Linear Regression, Logistic Regression, Decision Trees, Random Forest, Support Vector Machines (SVM), Naive Bayes, K-Nearest Neighbors (KNN), Principal Component Analysis (PCA), K-Means Clustering, Hierarchical Clustering, Gradient Boosting, CNN, RNN, LSTM, Q-Learning.
* **Python libraries:** NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, PyTorch, Keras, SciPy, NLTK, OpenCV, Pillow, Requests, BeautifulSoup, Seaborn, Click, Pygame.
* **Cloud Technologies:** AWS S3, Redshift, RDS, Glue, Lambda, SNS, SQS, Athena, Kinesis, Azure, Azure Data Lake, Data Factory, Key Vault, Azure Synapse Analytics (DW), Google Cloud Platform (GCP) Cloud Services (Paas & Iaas).
* **Big Data Technologies:** Hadoop, Databricks, Cloudera, HDFS, Hive, Pig, HBase, Sqoop, Flume, Map Reduce,  Cassandra,  Zookeeper, Airflow, Dag, Kafka, Spark, Spring Boot, Oozie, YARN.
* **IDE:** PyCharm, Spyder, PyDev, IntelliJ IDEA, Sublime Text, Brackets, Eclipse, NetBeans.
* **Build Tools:** GNU, Apache Ant, Apache Maven, Buck, Boot, Grunt.
* **Messaging Platforms:** Splunk, Kafka, Rabbit, Selenium.
* **Versioning Tools**: GIT, SVN, Mercurial, GitHub, Bitbucket, GitLab.
* **Visualization Tools:** Tableau, Quick Sight, SSRS, Power BI, SAS.

**WORK EXPERIENCE**

**Client: Ucare, Minneapolis, Minnesota.          Feb 2022 - Present**

**Role: Sr. Data Engineer**

**Responsibilities:**

* Created **RESTful** web services with **Django MVT, MySQL,** and **MongoDB** to manage catalog and pricing data.
* Worked extensively in web development with **Python frameworks** such **as Django, Flask, Pyramid** for building secure and scalable web applications.
* Worked with various Integrated Development Environments for Python, including **PyCharm, PyScripter, PyStudio, PyDev,** and **Sublime Text.**
* Implemented web services using **Django MVT** and **MySQL.**
* Created Desktop applications using **Python Frameworks** such as **PyQt**, and **Tkinter.**
* Utilized **Python-based GUI** components for the front-end functionality such as selection criteria.
* Created Interactive Interfaces using **Python** and other Technologies such as **HTML, CSS, PHP,** and **JavaScript.**
* Utilized **Pandas API** to format data as time series and tabular data, enabling easy data manipulation and retrieval.
* Used **Python-MySQL connector** and **MySQL db** package to write and execute various **MYSQL** database queries from **Python**.
* Utilized various Python libraries such as **Python, NumPy,** **Matplotlib,** and was involved in the setup of the development environment, code installation, and implementation of **SVN.**
* Worked with SQL databases like **MS SQL, Oracle,** and **MongoDB.**
* Developed the object model, data model, and tables, defined constraints and wrote necessary stored procedures, functions, triggers, and packages for **Oracle Database** using **Python.**
* Utilized **AJAX** and **jQuery** to transmit **JSON** data objects between the frontend and controllers. Used **Python** and **Django** to interact with the jQuery UI, manage storage, and delete content.
* Created **SQL Queries, Stored procedures, functions, packages, tables, views,** and **triggers.**
* Successfully migrated **Django** databases from **MySQL** to **PostgreSQL** while ensuring complete data integrity.
* Created a distributed worker framework using **Celery** in conjunction with **RabbitMQ, MySQL, Django**, and **Flask.**
* Worked with **MongoDB** concepts such as locking, transactions, indexes, replication, and schema design.
* Involved in utilizing the **pymongo** module to establish a connection with **MongoDB** and performed **CRUD** (Create, Read, Update, Delete) operations on the database.
* Implemented **Multithreading** module for concurrent operations and performed complex networking operations such as **SMTP mail server** and **web server** using **Python.**
* Utilized **Python libraries** like **Boto3** to work with **AWS services** and used **Python** and **Django** for creating graphics, implementing business logic, and processing **XML data exchange.**
* Implemented AWS solutions using services such as **EC2, S3, RDS, EBS, Elastic Load Balancer,** and **Auto Scaling groups.**
* Responsible for implementing the **CI/CD** pipeline of the application using the **AWS CI/CD** stack. Worked on developing storage and backup solutions on **AWS**, utilizing **S3 buckets** and **Glacier.**
* Effectively utilize a range of AWS services, including **AWS CloudFormation, Development Endpoints, AWS Glue, EMR, Jupyter/Sagemaker Notebooks, Redshift, S3,** and **EC2 instances,** to establish and optimize an AWS Data Platform.
* Utilized **Terraform** as infrastructure as code tool to create and manage staging and production environments on **AWS** and automated the build process using **Jenkins.**
* Developed a **Kafka producer client** using **Confluent Kafka** to generate events in a **Kafka topic,** which was designed and implemented.
* Created a Real-Time Stream Processing Application using **Kafka, Spark, Hive,** and **Scala.** The application was used to perform streaming **ETL** and machine learning implementation in real-time.
* Extensive experience in implementing **ETL** methodology for data extraction, transformation, and loading using **Microsoft BI Studio products.**
* Developed and Implemented **Map Reduce jobs** using **Hadoop** to work with **Bigdata.**
* Performed redesigning and migration of data warehouses to **Snowflake Data Warehouse.**
* Utilized Autosys and Tidal to schedule **UNIX** shell scripts and **Informatica workflows.**
* Built scenario analysis with time series plots in **SAS Visual Analytics.**
* Worked in **Agile methodologies, Scrum stories,** and **sprints** in a Python-based environment, including data analytics, data wrangling, and Excel data extracts.
* Proficient in using Continuous Integration servers like **Jenkins** with **Ant** and **Maven** configuration.
* Utilized **DevOps** concepts and tools, including **Bamboo, Jenkins, Maven, Bitbucket,** and **Jira,** to create continuous delivery pipelines. Additionally, I have implemented DevOps automation using **Terraform, Ansible, SaltStack,** and **Packer.**
* Implemented **Docker containers** and **Kubernetes** for container orchestration, enabling the efficient deployment and scaling of applications across different environments.

**Environment:** Docker, Kubernetes, Jenkins, Maven, RabbitMQ, Django, Python, ETL, Flask, Pyramid, Kafka, Spark, Agile, Microsoft BI Studio, Glacier, Pycharm, Informatica, Bamboo, Maven, Jira.

**Client: SiriusXM, NEW York.          Nov 2019 – Jan 2022**

**Role: Sr. Data Engineer**

**Responsibilities:**

* Involved in the complete **Software Development Life Cycle (SDLC),** including analysis, specification, design, implementation, and testing phases.
* Used agile methodology for development & created Restful web services using **Python REST API** Framework.
* Worked with **REST-based microservices** and have used **REST** templates to develop the UI for client websites using **HTML, CSS,** and **JavaScript.**
* Worked with **REST APIs** to access and analyze data and used **JSON** and **XML** for resource transfer.
* Implemented both **WAMP** (Windows, Apache, MYSQL, and PYTHON/PHP) and **LAMP** (Linux, Apache, MYSQL and PYTHON/PHP) Architectures.
* Implemented **Python pickle** and have created custom images using **Python Imaging Library**.
* Worked extensively with **Python** for backend automation and building applications.
* Implemented the application using **Python Spring IOC** (Inversion of Control), **Django Framework** and handled security using **Python Spring Security.**
* Utilized **Python** and **Django** to create graphics, process **XML** documents, exchange data, and implement business logic between servers.
* Used **Python** and **Django** to interface with the **jQuery UI** and manage the deletion and storage of content.
* Tested the frontend and backend modules of the entire application using **Python** on the Django Web Framework. Developed Server-side automation using **Node JS** scripting and connected different types of SQL and **NoSQL** stores from Node JS.
* Utilized **Relational Database Management Systems (RDBMS)** such as **SQLite, Oracle, MySQL**, as well as **NoSQL** databases such as **MongoDB** and **Apache Cassandra (versions 1.2, 2.0, and 2.1).**
* Utilized **object-relational mapping (ORM)** solution to map data representation from **MVC** model to **Oracle Relational data model** with an **SQL-based schema.**
* Developed merge jobs in **Python** to extract and load data into **MySQL** databases. I also successfully migrated a **Django** database from **SQLite** to **MySQL** and **PostgreSQL,** ensuring complete data integrity.
* Designed and implemented custom **Bash scripts** to control the data flow from the **PostgreSQL** database and used **Django** configuration to manage URLs and application parameters.
* Configured **NoSQL** databases like **Apache Cassandra** and **Mongo DB** to increase compatibility with **Django.**
* Worked with caching applications for large scale applications such as **Redis, Memcached.**
* Implemented **sockets, Twisted ZeroMQ,** and **XMLRPC** programs to retrieve data from various data centers.
* Established best practices for monitoring **elastic search** and implemented them.
* Utilized **MongoDB** concepts, such as **CRUD** operations and the aggregation framework.
* Developed and Deployed **SOAP** based Web Services on **Tomcat Server.**
* Used **Jenkins** for continuous integration for code quality inspection and worked on building a local repository mirror and source code management using **GitHub.**
* Upgraded existing UI with **HTML, CSS, AngularJS, Bootstrap**, and **Node JS.**
* Utilized **PyQt** to design and implement data tables for displaying information and performed **CRUD** operations like adding, deleting, and updating records.
* Developed various types of **Azure Functions**, such as **Http Trigger, Timer Trigger, Durable Functions, Service Bus Trigger,** and **Event Hub Trigger.**
* Implemented enterprise-level **ERP** Integration systems using **Azure Logic Apps, Azure Functions, Azure Storage,** and **Service Bus Queues.**
* Utilized **Azure Resource Manager Templates**, **DevOps,** and **Git** repository for automating deployments and implemented **Continuous Integration (CI/CD).**
* Developed a fully automated **CI/CD** pipeline using **GIT, Jenkins, MYSQL**, and custom Python tools. Worked on container-based deployments using **Docker,** including working with **Docker images, Docker Hub, Docker-registries**, and **Kubernetes.**
* Utilized **Docker** for containerization and cloud provisioning and automation.
* Utilized the **Package Configuration Wizard** to configure **SSIS** packages, enabling them to run seamlessly across different environments.

**Environment:** Redis, Apache Cassandra, Mongo DB, Postgre SQL, Azure Cloud, GitHub, Bootstrap, Docker, Python, Git, Jenkins, XML, Apache Tomcat.

**Client: McKesson, Irving, Texas.          Feb 2017 – Oct 2019**

**Role: Sr. Python Developer**

**Responsibilities:**

* Worked with various programming languages such as **Python 2.X, Python 3.X, C, C++, Java,** and **GoLang.** and web technologies such as **HTML, CSS, XHTML, Java Script, jQuery, AJAX, XML,** and **JSON.**
* Implemented **Object Oriented Python, Hash Tables (Dictionaries),** **Multithreading, Django, MYSQL, Exception Handling,** and **Collections** using Python.
* Utilized **Python** data structures such as **Dictionaries, Tuples** and **sqlite3** for efficient data management.
* Worked with various **MVW** frameworks such as **Django, Angular JS, HTML, CSS, XML, Java Script, jQuery,** and **Bootstrap.**
* Wrote **JSON REST APIs** using **Golang** and used various libraries such as **Beautiful Soup, numpy, scipy, matplotlib, python-twitter, Panda’s data frame, networkx, urllib2,** and **MySQLdb** for database connectivity.
* Developed API services in **Python/Tornado** and **NodeJS** for distributed architectures.
* Developed web services with Python programming language and implemented **JSON-based RESTful** and **XML-based SOAP web services.**
* Handled **Django ORM** (Object-Relational Mapper) and **SQLAlchemy.**
* Developed graphics, implemented business logic, and processed **XML** documents using **Python** and **Django.**
* Utilized **Python OpenStack API'S** and **GUI** framework - **Pyjamas** for web development.
* Worked with **Python Web frameworks** such as **Django, Pyramid, Flask**, and **web2Py.**
* Utilized IDEs such as **sublime text, Spyder,** and **NetBeans.**
* Created **PySpark scripts** to process data and loaded the results into **Redshift DB** using different **PySpark** techniques.
* Developed a tool for analyzing server-based web traffic statistics using **Flask** and **Pandas.**
* Worked with various Relational Database Management Systems (RDBMS) such as **MySQL, Microsoft SQL Server, Oracle,** and non-relational databases (NoSQL) such as **MongoDB** and **Cassandra.**
* Worked with databases such as **MySQL, PLSQL, Oracle, Microsoft SQL, PostgreSQL,** and **MongoDB.**
* Worked with **Hadoop ecosystem** components like **Hadoop , Hive, Pig, Sqoop, HBase, Cassandra , Spark, Spark Streaming, Spark SQL , Oozie, Zookeeper , Kafka, Flume, MapReduce,** and **Yarn.**
* Scheduled and executed multiple **Hives** and **Pig** jobs using **Oozie workflow** engine and utilized **Oozie** Operational Services for batch processing and dynamic workflow scheduling.
* Assisted in establishing a QA environment and updating configurations to enable the implementation of **Pig** and **Sqoop** scripts and Coordinated clusters using **Zookeeper.**
* Used **Spark API** to perform analytics on data in **Hive,** specifically over **Horton work Hadoop YARN and** tools like **Tez** and **Ambari.**
* Worked on **Apache Nifi** as an **ETL** tool for batch processing and real-time processing.
* Experience in **Amazon Web Services (AWS)** cloud platform like **EC2, Virtual private clouds (VPCs), Storage models (EBS, S3, instance storage), Elastic Load Balancers (ELBs).**
* Deployed **Cloudera** distribution on **AWS EC2** instances and established **Amazon EMR** with **S3** integration for backup storage.
* Worked with **AWS** workflow orchestration tools such as **Airflow** and **Step Functions.**
* Wrote **Python scripts** to move data from on-premises to **AWS S3.**
* Developed **Docker** images with multiple microservices and managed them using **ECS, ALB,** and **Lambda** for container orchestration.
* Used **AJAX** framework with **JQuery** for asynchronous web development.
* Implemented **Dojo** for creating widgets and handling events on web pages.
* Utilized **AMQP** and **RabbitMQ** for message queuing and asynchronous communication between microservices.
* Extensively worked on **Hudson/Jenkins**, Build Forge for continuous integration, and for end-to-end automation for all builds and deployments.

**Environment:** Flask, Airflow, AWS EC2, AJAX, VPC, ORM, SQL Alchemy, Hadoop, Pig, Cassandra, Hive, Python, Pyspark, Oozie, Bootstrap, NodeJS, Airflow, Redshift DB.

**Client: Ambit Software PVT, Hyderabad.          May 2013 – Dec 2016**

**Role: Python Developer**

**Responsibilities:**

* Developed **Python** scripts to automate report generation, FIX message sending, **SOAP requests**, **TCP/IP programming,** and multiprocessing jobs.
* Used **Python** and **Django** to develop graphics, process XML documents, exchange data, and implement business logic between servers.
* Worked with **MVC** architecture and high-level **Python web frameworks** such as **Django** and **Flask.**
* Utilized RESTful and **SOAP** web services, as well as **SoapUI**, for API development.
* Developed object-oriented programming (OOP) concepts using **Python, Django,** and **Linux.**
* Worked with various web development frameworks such as **Django, Angular.js, JavaScript, Backbone.js, JQuery,** and **Node.js.**
* Worked with **Java EE frameworks** like **Struts2, Spring MVC,** and **Hibernate** utilizing the **MVC architecture.**
* Utilized the **pandas** and **numpy** packages in **Python** to perform data cleaning, feature scaling, and feature engineering.
* Applied clustering algorithms such as Hierarchical and K-means using Scikit and Scipy libraries.
* Utilized **Test Driven Development (TDD), Agile, Scrum,** and **Waterfall** methodologies.
* Worked with ticketing systems such as **JIRA, Bugzilla,** and other proprietary tools.
* Monitored and troubleshooted **Hadoop** jobs using **Yarn Resource Manager** and **EMR job logs** using **Genie** and **Kibana.**
* Implemented advanced machine learning techniques such as **Light GBM** and **Pycaret** to detect meaningful patterns and develop predictive models.
* Demonstrated deploying, managing, migrating production databases in **Google Cloud Platform (GCP).**
* Explored **Spark** to optimize existing algorithms in **Hadoop** using **Spark Context, Spark-SQL, Data Frame, Pair RDD, Spark, YARN**, and **PySpark.**
* Developed and implemented predictive models for data analysis using various machine learning algorithms like **Linear Regression, Classification, Multivariate Regression, Naive Bayes, Random Forests, K-means clustering, KNN, PCA** and **regularization.**
* Created various automation tools using **Shell Scripting** and **Python** to streamline recurring tasks.
* Created complex calculated fields and parameters, implemented toggled and global filters, dynamic sets, groups, actions, and custom color palettes using **Tableau, Power BI** to perform statistical analysis and meet business requirements.

**Environment:** Tableau, Power BI, ML Algorithms, Bugzilla, JIRA, Spring MVC, SOAP, Hadoop, YARN, TDD, Spark, GCP.