**Pradeep Koripelly**

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**Professional Summary:**

* **Sr Python Developer** with **10 years** of experience in Analysis, Design, Development, Management and Implementation of stand-alone and client-server enterprise applications.
* Experienced working with **Django** templates, views, forms, authentication, models and regular expressions.
* Experience in developing **Web-Applications** implementing **Model View** Template architecture using **Python** and **Django** **web application framework**.
* Experience of software development in **Python** (libraries used: **libraries- BeautifulSoup, numpy, scipy, python-twitter, Pandas**)
* Experience with **Numpy, Scipy, HTTPLib2, Beautiful Soup** and **Pandas python** libraries during development lifecycle.
* Experience in working with **python** editors like **PyCharm**, and **PyScripter**
* Hands on experience on cutting edge technologies like **Azure**, **Bigdata**, **PySpark**, **snowflake**, **Talend** in **python**.
* Experienced in **WAMP** (Windows, **Apache**, **MYSQL**, and **Python**) Architecture and **LAMP** (**Linux**, **Apache**, **MYSQL**, and **Python**) Architecture.
* Good Experience in using **Microsoft BI** Studio products like **SSIS, SSAS, SSRS** for the implementation of **ETL** methodology in data extraction, transformation and loading.
* Expertise in developing Restful micro services using **Python** aiohttp and **FASTAPI** frameworks.
* Data Science & Quantitative Analysis (**Regression Analysis, Machine Learning**).
* Evaluated Various **AI (Artificial Intelligence)** & **ML (Machine Learning)** tools (**MS Azure Machine Learning studio, Dataiku**).
* Hands on Experience in **AWS** like **Amazon EC2, Amazon S3, Amazon Redshift, Amazon EMR** and **Amazon SQS**.
* Experience in Developing **GitLab** **CI/CD** to run components tests, auto increment versions, and Deploy to **Crashlytic** Beta users.
* Expertise in Production support and knowledge of deployment using **AWS**, **Heroku** and **Jenkins**.
* Experience in developing web applications using **Django** framework including developing **RESTFUL** services using **Django** and building **API Gateways**.
* Experience in **Azure** **webapp**, **Logic App**, **Azure Blob**, **Azure functions** and web jobs, **Azure SQL** and other.
* Created sessions, configured workflows to extract data from various sources, transformed data, and loading into data warehouse.
* Solid understanding in **Design Patterns**, **MVC**, **Python** **Algorithms**, **python** **Data** **Structures**.
* Good Knowledge of **Serverless** application models (**SAM**). Worked extensively on **aws** sam.
* Good knowledge of utilizing the cloud technologies like **AWS** **cloud**. Using many services from **AWS** cloud, like **S3, EC2, VPC, IAM, RDS, Lambda, API Gateway, cloud formation, cloud watch, Batch, SQS, DynamoDB, Connect, Secrets Manager, ECS, EKS, Fargate, Route53, Elastic Cache,** and many more.
* Utilized **Kubernetes** and **Docker** for the runtime environment of the **CI/CD** system to build, test and deploy.
* Experienced in building aps with **spring** **MVC**, **spring boot** and using in **Angular** 9, **ReactJs** with **typescript**.
* Working experience with major databases technologies such as **SQL, MySQL, DB2, ETL, Talend, and Ms SQL**.
* Good experience in developing web applications implementing Model View Controller architecture using **Django** web application framework.
* Good experience on **XML/JSON** based **SOAP** and **REST** **web services**. Good working knowledge of web application servers **Apache Tomcat** and **Web logic**.
* Experienced with full software development life-cycle, architecting scalable platforms, object oriented programming, database design and agile methodologies
* Created a framework using **plotly**, dash and flask for visualizing the trends and understanding patterns for each market using the history data.
* Experience in a Python based environment, with data analytics, data wrangling and Excel data extracts.
* Created **Docker** images using a **Dockerfile**, worked on **Docker** container snapshots, removing images and managing **Docker** volumes.
* In-depth understanding of **PySpark** Architecture including Spark Core, Spark SQL, Data Frames, Spark Steaming with **PySark**
* Good Experience in software configuration management using **GIT**, and **SVN**
* Experience writing daily batch jobs using **UNIX** shell scripts, and developing complex UNIX Shell Scripts for automation of **ETL**.
* Experience in using **Scikit**-Learn and **Statsmodels** in Python for Machine Learning and Data Mining.

**Technical Skills:**

|  |  |
| --- | --- |
| **Languages** | Python, SQL |
| **Frameworks** | Django, FASTAPI, Flask |
| **Python Packages** | NumPy, Pandas, Matplotlib, PySide, SciPy, plotly, wxPython, PyTables |
| **Cloud Services** | AWS, VMware, Microsoft Azure, Azure blob storage, Azure queues, Azure Tables. |
| **Web Technologies** | CSS, HTML, Bootstrap, jQuery, JavaScript, AngularJS, JSON |
| **Web/App Server** | Nginx, Apache Tomcat, IIS |
| **IDE** | PyCharm, PL/SQL Developer, TOAD |
| **Other Tools** | Jenkins, PySpark, IBM Integration and Web Builder, JIRA, Bugzilla, Rally, Version One, ETL tools (Talend), DB2, and Data WareHouse. |
| **Management Tools** | SVN, Git, Docker, Kubernetes. |
| **Databases** | Oracle 10/11g, MySQL, SQL Server |
| **Operating Systems** | Unix, Linux, Windows, and Mac OS |

**Education:**

* Bachelor of Engineering in ECE from JNTUH – 2011.

**Professional Experience:**

**Client: Freddie Mac, McLean, VA, (Remote) July 2022 – Till Date**

**Role: Sr Python Developer AWS Cloud**

**Responsibilities:**

* Developed application logic using Python, JavaScript, and Java.
* Designed front end and backend of the application utilizing Python on Django Web Framework.
* Configured AWS Multi Factor Authentication in IAM to implement 2 step authentication of user's access using Google Authenticator and AWS Virtual MFA.
* Included security groups, network ACLs, Internet Gateways, and Elastic IPs to ensure a safe area for organization in AWS public cloud.
* Designed the screens with priming, angular9 with typescript.
* Migrating the coding from Hive to Oracle using Python Spark SQL (PySpark), Data frames and RDD.
* Used Python modules like Restful, Matplotlib and Pandas library for statistical analysis and generating complex graphical data and NumPy for numerical analysis.
* Written UNIX shell scripts to automate the jobs and scheduling Cron jobs for job automation using commands with Crontab.
* Design and Construct of AWS Data Pipeline using various resources in AWS including AWS API Gateway to receives response from aws Lambda and retrieve data from Snowflake using Lambda functions.
* Wrote Ansible Playbooks with Python SSH as the Wrapper to Manage Configurations of AWS Nodes and Test Playbooks on AWS instances using Python.
* Leverage Image, Text and Numeric data within Confidential using AI (Artificial Intelligence) tools to deliver results.
* Built the model on Azure platform using python and PySpark for the model development and Dash by plotly for visualizations.
* Extensively wrote Talend ETL logic using tMap, tAggregate, tHiveRow an custom Java codes and load into OLAP.
* Translated Business Requirements into Informatica mappings to build Data Warehouse by using Informatica Designer, which populated the data into the target Star Schema.
* Used Amazon Web Services (AWS) for improved efficiency of storage and FASTAPI Access.
* Exported using data into Azure blob container, and logged exceptions into azure using Logger.
* Designed AWS Cloud Formation templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates.
* Experience in Scheduling Talend jobs using TalenD Administration Console (TAC).
* Created scripts in Python which integrated with Amazon API to control instance operations.
* Experience in developing Object Relation mapping using Hibernate, JDBC, Spring JDBC Data with RDBM (Oracle, DB2 and MySQL) and NoSQL (Redshift, Cassandra) database.
* Developed Merge jobs in Python to extract and load data into MySQL database.
* Built numerous Lambda functions using python and automated the process using the event created.
* Involved in designing and developing Amazon EC2, Amazon S3, Amazon RDS, Amazon Elastic Load Balancing, Amazon SQS, and other services of the AW’S infrastructure.
* Utilized Configuration Management Tool Chef and created Chef Cookbooks using recipes to automate system operations. Docker/Kubernetes Containerization of cloud-based applications.
* Implemented build stage- to build the microservice and push the docker container image to the private docker registry.
* Worked on end-to-end setup of the Artifactory pro as a docker container with a secure private docker registry and local docker repositories for storing the built docker images.
* Designed SSIS Packages to extract, transfer, load (ETL) existing data into SQL Server from different environments for the SSAS cubes.
* Experience in applied R/SAS programming and SQL programming complex RDBMS Data structures.
* Created a framework using plotly, dash and flask for visualizing the trends and understanding patterns for each marketing using the history data.
* Using Machine Learning (ML) predicted major economic indicator based on detailed credit data from client & cloud environment.
* Ran build jobs and integration tests on Jenkins Master/Slave configuration.
* Managed Servers on the Amazon Web Services (AWS) platform instances.
* Built servers using AWS, importing volumes, launching EC2, RDS, creating security groups, auto-scaling, load balancers (ELBs) in the defined virtual private connection.
* Maintained the reliability, availability, and performance of Amazon Elastic Compute Cloud (Amazon EC2) instances.
* Experience in Hadoop BigData integration with Talend ETL on performing data extract, loading and Transformation process.
* Worked on building the ETL architecture and Source to Target mapping to load data into Data warehouse.
* Maintained fully automated CI/CD pipelines for code deployment (GitLab/ Jenkins, IBM UC Deploy).
* Conducted systems design, feasibility and cost studies and recommend cost-effective cloud solutions such as Amazon Web Services (AWS).
* Implemented Azure Application insights and exported RED (Requests, Error, Duration) counts to AI.
* Monitored the AWS resources using Cloud Watch and application resources using Nagios.
* Involved in complete SDLC life cycle - Designing, Coding, Testing, Debugging and Production Support.
* Involved in day-to-day maintenance and problem analysis on storage.

**Environment:** Python, PySpark, Django, Matplotlib, Azure blob, Azure storage, Pandas, MySQL, Angular 9, Linux, HTML, XHTML, SVN, Talend, DB2, Data structures, OpenTelementry, FASTAPI, ETL, Snowflake, Data WareHouse, Plotly, Docker, Kubernetes, CSS, AJAX, Bugzilla, JavaScript, Apache Web Server, AI (Artificial Intelligence), ML (Machine learning).

**Client: CGI Federal, Fairfax, VA Feb 2021 – Jun 2022**

**Role: Sr Python Developer AWS**

**Responsibilities:**

* Responsible for gathering requirements, system analysis, design, development, testing and deployment.
* Evaluating business requirements and preparing detailed specifications that follow project guidelines required to develop written programs.
* Working on various phases of Software Development Life Cycle using Agile - Scrum Software development methodology.
* Fixing bugs, enhancing applications by improving code reuse and upgraded performance by making effective use of various design patterns.
* Experience data processing like collecting, aggregating, moving from various sources using PySpark and Panda Libraries. Experience in NoSQL columns.
* Good working knowledge on machine learning models such as supervised learning, unsupervised learning, regression and classification liner regression, tree and forest using python packages such as scikit lear, pandas, Numpy, seaborn and plotly.
* Developed complex ETL jobs from various sources such as SQL server and other files loaded into target databases using talend OS ETL tool.
* Written Pre and Post Session SQL commands (DDL & DML) to drop and recreate the indexes on data warehouse.
* Developed the UI with Angular 7.
* Building a distributed system for triggering and executing daily data processing jobs which contains a high-availability scheduler (built with Python), a cluster of workers (built with Python), and UI (built with Python and Django).
* Experience delivering products or solutions that utilize machine learning, Natural Language Processing or other forms of AI (Artificial Intelligence).
* Designed ML (Machine Learning) / NLP approach for extracting items price and manufacture from web pages.
* Designed a range of containers using the Docker engine and Docker System environments to deploy microservice-oriented environments for scalable applications.
* Responsible for the development of entire backend modules using Python.
* Integrating Amazon Cloud Watch with Amazon EC2 instances for monitoring the log files and track metrics.
* Developed and implemented core FASTAPI Services using Python with Spark (PySpark).
* Extracted data from various source systems like Oracle, SQL Server, DB2, XML and flat files and loaded into relational data warehouse and flat files
* Worked on organizing, deploying and handling container replicas to a node cluster using Kubernetes.
* Creating AWS S3 buckets, performed folder management in each bucket, managing cloud trail logs and objects within each bucket.
* Experienced in implementing Enterprise systems based on Microsoft Azure PaaS platform using Azure Storage Queue, Azure Blob, Azure Web apps.
* Deploved code using CI/CD pipeline using Azure Devops.
* Creating Highly Available Environments using Auto-Scaling, Load Balancers, and SQS.
* Automating the existing scripts for performance calculations using NumPy and SQL alchemy.
* Defining branching, labelling, and merge strategies for all applications in Git.
* Used Talend tool to create workflows for processing data from multiple source systems.
* Configuring Elastic Load Balancers with EC2 Auto Scaling groups
* Configuring S3 to host Static Web content.
* Responsible for S3 Versioning and lifecycle policies to and backup files and archive files in Glacier
* Creating monitors, alarms, and notifications for EC2 hosts using CloudWatch.
* Created a highly0scable, distributed system for running web applications and web services by working with architects and developers and ensuring the implementation of Restful Web services and FastAPI design.
* Working on Performance Tuning and Query Optimization in AWS Redshift.
* Designing application on AWS taking advantage of Disaster recovery.
* Used Azure Devops from repository and controlling the code without any conflicts, logging and monitoring tickets.
* Developing Cloud Formation scripts to build on demand EC2 instance formation.
* Utilizing AWS CLI to automate backups of ephemeral data-stores to S3 buckets and EBS.
* Creating nightly AMIs for mission critical production servers as backups.
* Configuring and maintaining the monitoring and alerting of production and corporate servers/storage using Cloud Watch.

**Environment:** Python, PySpark, Django, Azure, NumPy, plotly, Angular, HTML/CSS, ETL, FASTAPI, MySQL, GIT, CI/CD, Talend, Snowflake, GitHub, AWS (RDS, IAM, S3 Cloud Watch), OpenTelemetry, Docker, Kubernetes, ML (Machine learning), AI (Artificial Intelligence),

**Client: Intel Corporation, Hillsboro, OR   
Role: Sr. Python Developer / Cloud Application Developer Apr 2019 – Feb 2021  
Responsibilities:**

* Responsible for debugging and troubleshooting the web application.
* Solved production issues at the time of emergency.
* Design and develop API’s to share data with cross functional teams using Hug and FASTAPI framework.
* Daily retailer file imports using asyncio patterns to minimize the processing time
* Designed and developed data management system using PostgreSQL
* Redis caching for fast reads for good shopper experience
* Managed Data storage and processing pipelines in GCP for serving AI (Artificial Intelligence) and ML (Machine learning) services in production, development and testing using SQL, Spark and Python and AI VM.
* Followed different caching mechanisms for different use cases viz., lazy-loading pattern, write-through pattern
* Development of Artificial intelligence (AI) based threat intelligence engines.
* Implemented Spark using PySpark libraries for faster testing and processing of data.
* Contributed to complex APIs which should provide full-text search, etc.
* Write unit tests for both APIs and batch jobs.
* Written Pre and Post Session SQL commands (DDL & DML) to drop and recreate the indexes on data warehouse.
* Used AngularJs as framework to create single page applications (SPA) which can bind data to specific views and synchronize data with server using Saas, Bootstrap and AngularJs.
* Monitor daily batch jobs to check any failures and fix them.
* Worked on multiple AWS services like ECS, AWS Batch, s3, etc.
* Coded test programs and evaluated existing engineering processes.
* Experience in the field of Data WareHouse Concepts like Snowflake, using ETL tools such as Informatica Power Center, Databases as DB2, Oracle, and Ms SQL Server.
* Analysed the SQL scripts and designed solutions to implement using PySpark.
* Designed and configured database and backend applications and programs.
* Performed research to explore and identify new technological platforms.
* Creating unit test/regression test framework for working/new code.
* Used GIT for the version control.
* Worked on Power Shell scripts to automate the Azure cloud system creation of Resource groups, Azure Web Application, Azure Storage blob & Tables, Firewall rules.
* Used AWS CloudFormation, GitHub actions for continuous deployments
* Groovy is an object-oriented programming language which could be described as java paired with a dynamic scripting language like python.
* Participated in the complete SDLC process.
* Core development experience Groovy Grails restful web services.
* Effectively communicated with the external vendors to resolve queries.
* Developed, tested, and debugged software tools utilized by clients and internal customers.
* Coded test programs and evaluated existing engineering processes.

**Environment:** Python, Django, NumPy, PySpark, Postgres, Snowflake, ML (Machine learning), Redis, AngularJs, REST, Azure, Kibana, Mac, PyCharm, Groovy, GIT, AWS Cloud.

**Client: USAA, San Antonio, TX       Feb 2017 – Mar 2019  
Role: Python Developer  
Responsibilities:**

* Involved in AWS user, EC2 server provisioning, creating policies and attaching various polices to user.
* Created S3 buckets and managed policies for S3.
* Configured AWS Identity Access Management (IAM) Group and users for improved login authentication.
* Process good knowledge in creating and launching EC2 instance using AMI’s of Linux and Windows.
* Creating Public and private subnet within the VPC and attaching them to the EC2 instance based on the requirement.
* Created and configured elastic load balancers and auto scaling groups to distribute the traffic and to have a cost efficient and highly available environment.
* Implemented CSV file load process in Oracle in PySpark by using Panda libraries.
* Integrated Amazon Cloud Watch with Amazon EC2 instances for monitoring the log files and track metrics.
* Configured S3 buckets with various life cycle policies to archive the infrequently accessed data to storage classes based on requirement.
* Utilized the python Unit test framework, for all python applications and used Django database FASTAPI to access database objects.
* Created roles for EC2, S3, Cloud Watch and EBS resource to communicate using IAM.
* Created volumes for storing application files for use with EC2 instances whenever they are mounted to them.
* Extracted data from various source systems like Oracle, SQL Server, DB2, XML and flat files and loaded into relational data warehouse and flat files.
* Created load balancers (ELB) and used Route53 with failover and latency options for high availability and fault tolerance.
* Setup Snapshots to take backups of the volumes and images to store launch configurations of the EC2 instances.
* Complete understanding on S3 life cycle management.
* Converted excel to csv file using python spark (PySpark).
* Worked on Python Lists, Dictionaries.
* Used existing deal model in python to inherit and create object data structure for regulatory reporting.
* Design and develop REST APIs using the FastAPI framework.
* Daily retailer file imports using asyncio patterns to minimize the processing time
* Designed and developed data management system using PostgreSQL
* Contributed to complex APIs which should provide full-text search, etc.
* Write unit tests for both APIs and batch jobs
* Monitor daily batch jobs to check any failures and fix them.
* Designed and Developed python based FASTAPI (Restfull Web Service) to interact with company’s website.
* Worked on multiple AWS services like ECS, AWS Batch, s3, etc.
* Coded test programs and evaluated existing engineering processes.
* Used GIT for the version control.
* Used AWS CloudFormation, GitHub actions for continuous deployments
* Groovy is an object-oriented programming language which could be described as java paired with a dynamic scripting language like python.
* Participated in the complete SDLC process.
* Core development experience Groovy Grails restful web services.

**Environment:** Python 3.9, FastAPI, Postgres, Redis, REST, PyCharm, Groovy, Snowflake, Dataware House, DB2, SQL, GIT, AWS Cloud, Kibana, Mac.

**Client: Citrix Systems, (On – Site, Fort Lauderdale, FL) Jan 2014 – Dec 2016**

**Client: Citrix Systems, (Off – shore, Bengaluru, India) Feb 2012 - Dec 2013**

**Role: Software Developer | Python Developer  
Responsibilities:**

* Worked on development of application architecture and blueprints to define application components.
* Designed and developed the user interface of the project with HTML, CSS and JSON.
* Developed front end and back-end modules of the project using Python with the Django Framework.
* Designed and developed the data management systems using MySQL databases.
* Written Python Scripts to parse the XML documents and load the data in the database.
* Utilized the existing Python modules and rewritten to deliver data in required formats.
* Worked on client-side validations and manipulations using HTML, XML, CSS and JQuery.
* Worked on Tableau reports performance tuning and dashboard optimization.
* Involved in publishing of various kinds of interactive data visualizations, dashboards and workbooks from Tableau Desktop to Servers
* Worked extensively with advanced analytics Reference Lines and Bands, Trend Lines.
* Worked on data blending and increased dashboard performance by extracting data and working with published data sources.
* Created Scatter Plots, Stacked Bars, Box and Whisker Plots using reference, Bullet Charts, Heat Maps, Filled Maps and Symbol Maps according to deliverable specifications.
* Worked on Tableau Calculations and applying Complex, Compound calculations to large, complex data sets.
* Created custom functions Date Range, Time Functions, and conditional formatting functions in the reports.
* Scheduled Extract refresh for weekly and monthly reports.
* Created Data Connections, Published on Tableau server for usage with operational or Monitoring Dashboards.

**Environment:** Python, NumPy, SciPy, Dockers, Pandas, C++, JSON, Tableau, Excels, Oracle DB, MySQL, DB2, PL/SQL, Linux, HTML, XHTML, CSS, AJAX, JavaScript, Apache Web Server