**Ramesh**

**(Senior Python Developer)**

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| **PROFESSIONAL SUMMARY** |
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● **11+** Years of experience in software design, development.

● Technically strong in architecture and development skills in **Python, Django** and **Flask**.

● Strong in system, design, analysis, implementation, testing, development, and maintenance of business applications using Model View Template Architecture using **Django**.

● Designing MySQL Queries using **Django ORM.**

● Designed and implemented database models using Django **ORM**, optimizing performance and scalability.

● Collaborated with cross-functional teams to integrate Django **ORM** with frontend and backend components, ensuring seamless data flow.

**●** Experience in design and implementation of RDBMS Databases like **MySQL**, **Oracle, MongoDB.** ● Working with cross-functional teams (like Engineers/operations/managers/Vendors).

● Comprehensive problem solving abilities and analytical reasoning.

● Good interpersonal skills, commitment, result oriented, hard working with a quest and zeal to learn new technologies and undertake challenging tasks.

● Enthusiastic about learning new concepts in emerging technology.

* Defined proto message for DataBase structure.
* Added business logic to access the database and returning data.
* Implemented **gRPC** services.
* Reviewed code changes made by other team members through Critique.
* Automated web application (Kinaxis) for the different webpages like Forecasts, Plannable Items, Inventory.
* Good handson with angular and typescript to implement web UI components.
* Familiarity with DevOps practices such as **CI/CD,** version control, and **containerization** (Docker) in the context of deploying **Python applications** to AWS.
* Strong knowledge of **AWS Services** such as **IAM, EC2, Lambda, API Gateway, SNS, SQS,Glue, S3, CloudFormation, CloudWatch,** and familiarity with their APIs and SDKs
* Hands on experience in developing ETL data pipelines using **PySpark**, AWS Glue .
* Implemented **python Airflow script** to trigger pipelines.
* knowledge of **Terraform** to build infrastructure as a code.
* Knowledge of infrastructure automation and configuration management
* Implemented continuous build load process using **Jenkins** for firmware loading.
* Proficient in **shell scripting** and **SQL**
* Experience in ticket/bug tracking tools **JIRA** and **Buganizer**
* Having exposure on **AWS** services **boto, s3 and lambda.**
* Create **PySpark** frame to bring data from **DB2 to Amazon S3**.
* Exposure of **AWS Glue** fordata transformation, validation, and cleaning**.**
* **AWS Glue's** serverless architecture to build scalable and cost-effective ETL solutions without the need for infrastructure provisioning and management
* Strong knowledge on AWS EC2/VPC/S3/SQS/SNS based on automation **Terraform, Python, Bash Scripts**.
* Develop programs to automate the testing of controllers in CI/CD environment using Python, Bash script, Git an Linux command line.
* Used various AWS services including S3, EC2, AWS Glue,
* Exposure on implementation of API services using PySpark
* Designed and developed ETL integration patterns using **PySpark, AWS Glue**
* Completed Go(programming language) certification at Organization level
* **CI/CD** process using Jenkins.
* Good at building APIs using **FastAPI**, a modern and high-performance web framework for Python.
* Experienced in designing and implementing **RESTful APIs** with **FastAPI**, adhering to best practices for resource naming, **HTTP methods**, and status codes.
* Implemented **request validation** logic using **FastAPI's** declarative approach, leveraging Pydantic models for input data validation.
* Defined clear and concise **response models** using Pydantic, ensuring consistency and correctness of API responses.
* Good exposure with media modules like **openCV** and Pillow
* Implemented **REST APIs** for **media** management from **LinkedIn, Facebook, Twitter.**
* Secured Hackthon winner for implementing mouse activities using **OpenCV** module.

| **EDUCATION SUMMARY** |
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MCA from Jawaharlal Nehru Technological University Hyderabad with distinction during the year 2008 to 2011.

| **TECHNICAL SKILLS** |
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Programming Skills : Python, Java, Angular material, Typescript

Operating System : Ubuntu, Windows, Chromebook

Frameworks & Tools : Django, Flask, Onestack, GIT, CitC(Critique), Selenium

Programming IDE : PyCharm, Eclipse, python IDLE, VS code, Cider

Database : MySQL, Oracle, MongoDB, Spanner

| **PROJECT THESIS** |
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**Sr Python Developer at TCS Duration: May 2024 to Till date**

**Project: End-to-End Automated Testing for Treasury Cleaning Application**

**Domain**: Web application Automation

Designed and built an automated testing framework using Python and Selenium WebDriver to validate the functionality and accuracy of the treasury cleaning application. Developed comprehensive test cases to cover critical functionalities such as data validation, transaction processing, reconciliation, and reporting. Implemented integration tests to ensure seamless interaction between different modules of the application and external systems such as databases and third-party services.

**Roles and Responsibilities:**

* Created comprehensive test scripts to automate the testing of critical functionalities such as user login,redirecting the web page to the specific web element.
* Extracted the excel sheet downloaded and compared with data from DB.
* Implemented and maintained a test suite that runs on a continuous integration pipeline, ensuring that new code changes do not break existing functionality.
* Identified and reported bugs and issues by analyzing test results and collaborating with developers to resolve them.
* Developed scripts to manage test data and simulate various user scenarios to ensure robustness and reliability.

 **Environment**: Python, Selenium WebDriver, pytest, Git, Jenkins, Docker, XPath, CSS Selectors, DB2, oracle, JIRA.

**Sr Python Developer at Google Duration: Jan 2022 to March 2024**

**Project: Google Apps(Prio/LPM/gPlan)**

**Domain**: Web development and Automation

Prioritization is an application which will present the data on the dimensions of impact and ease of implementation, computed based on criteria data(input). The solution should allow new criteria to be added, disabled, modify and all other thresholds to be changed via web application.

Automation using java and selenium for web application (RapidResponse) and validating the data displaying in the UI in various sheets.

**Roles and Responsibilities:**

* Designed the database schema and implemented using a relational database management system (**RDBMS**) i.e. **Spanner**.
* Involved in Designing the database identifying entities, relationships, and attributes, and implementing it involves creating tables, indexes, and constraints.
* Implemented process progress bar using **Angular** components.
* Added business logic using **typescript** in various areas.
* Protos likely refers to **protocol buffers**, a method of serializing structured data. Defined protocol buffer messages to represent data structures that correspond to the database tables' structure. Protocol buffers are used for communication between different components of a system.
* Implementing logic (**DAO**) to interact with DB for data collection/updation in DAO files, which stands for Data Access Object. Its a design pattern used to separate the data access code from the business logic.
* Implemented DAO classes or components which are responsible for interacting with the database, including methods for data retrieval, insertion, updating, and deletion.
* Implemented business logic (services)/ REST APIs for the required tables as services layer of the application, which contains the application's core functionality.
* This layer includes services or classes responsible for processing data, applying business rules, and orchestrating interactions between different components.
* Additionally, **REST APIs** i.e. **gRPC** services are implemented to expose this functionality to external clients or other parts of the system, allowing them to interact with the application over HTTP.
* Using Java, implemented test scripts to automate interactions with the Kinaxis RapidResponse web application. This includes actions such as navigating to different pages, entering data into input fields, clicking buttons, and verifying data displayed in the UI.
* Identifying Web Elements such as IDs, class names, XPath, or CSS selectors and interacting with them to read the data.
* Once automated the interactions with the web application, validated the data displayed in various sheets or sections of the UI. This involves extracting data from the UI using Selenium and comparing it against expected values or patterns as per the **google rpc** response.
* Implemented Assertions to verify that certain conditions are met during the execution of test scripts. Using assertions to validate that the data displayed in the UI matches the expected data, signaling whether the test passed or failed.
* Adding teststep for the script implemented and adding the script in **testtracker** tool.
* Verifying the testscript execution through **TestTracker** and deploying them to **BeeDoo** for client availability.
* From **BeeDoo** automated/scheduled tests against the **Kinaxis** RapidResponse application, either locally or in a test environment.
* Maintained test suite and updated the test cases which are already implemented and as per the requirement refactoring the existing code.
* Hands on experience in developing ETL data pipelines using PySpark with GCP
* Implemented **PySpark APIs** instead of **BigQuery**
* Implemented **Airflow** python script for pipeline running.

**Environment**: Python, Spanner, Onestack, Java,selenium, BeeDoo, TestTracker, cider, critique, buganizer

**Sr Python Developer at CAPGEMINI (Internal) Duration: Feb 2019 to Jan 2022**

**Project: VM Recovery Manager**

VM recovery manager aimed at providing high availability for virtual machines in IaaS mode deployment of the cloud. It enables efficient usage of the hardware to minimize down time. It has capability of failure detections at various levels, such application failure inside VM, VM failure/crash and Host/Hypervisor failures. To achieve that it uses a central node know as K-SYS which is the decision maker in the system. It includes usage of various technologies, such as Clustering, REST APIs, Hypervisors, SAN storage, Virtual Machines.

**Roles and Responsibilities:**

* Implemented scenarios to test how well a system can handle **failure and recover gracefully** as it is crucial for systems, especially those handling critical operations, to be resilient in the face of failure.
* Automated the scenarios defined by writing **python script** to **inject failures** programmatically.
* Involved in not just running tests but also analyzing the results to find issues. By identifying functional problems and reporting them, contributed to the overall quality of the software.
* Refactored existing code as per the changes made in the product functionality to provide the functionality of **High Availability** and **Disaster Recovery.**
* Develop programs to automate the testing of controllers in CI/CD environment using Python, Bash script, Git and Linux command line.
* Used various AWS services including S3, EC2, AWS Glue.
* Running regression tests continuously ensures that new changes to the codebase don't inadvertently introduce bugs or regressions. It's a proactive approach to maintaining software quality and stability.

**Environment:** Python,shell scripting, IBM HMC(GUI), unix,ksys, Jira, Github

**Python Developer at Qualcomm Duration: Oct 2016 to Feb 2019**

**Project: Firmware Loader**

This is a tool which is widely used to load Android builds on the mobile chipsets.

It loads the build on the mobile chipset either in emergency mode or in adb mode. Tool supports different combinations like engineering images with different combinations of images. All the pre and post conditions will be verified once the load is completed.

**Roles and Responsibilities:**

* Involves developing algorithms of functionality to handle sparse images. Sparse images are used in systems where its’ beneficial to reduce storage space by representing large blocks of zeros efficiently.
* **Fastboot** **mode** is a protocol used to **flash device** partitions with new firmware or software images.
* Adding logic for apps override suggests implementing a feature that allows specific apps or components to be forcibly updated or **replaced during the fastboot process**.
* EDL (Emergency Download) mode is a mode used in Qualcomm-based devices for **flashing firmware**.
* Implementing changes in the enter **EDL** mode flow based on chipID likely involves adapting the process for entering EDL mode depending on the specific chipset or processor used in the device.
* implementing different handling or processing logic based on the version of the Android operating system running on the device.
* Android versions often introduce changes or improvements, and managing device status based on the Android version ensures compatibility and optimal performance.

**Environment:**  Python, shell scripting, unix, Jira, Github, EDL process, Android build load process

**Python Developer at Primesoft IP solutions Duration: Dec 2014 to Oct 2016**

**Project: Tely**

Tely 200 is a Video Conferencing endpoint that serves the Collaboration needs of Large Enterprises, and Huddle rooms. It is a cloud-optimized device that is designed to facilitate team collaboration. The device can be configured and managed through a web portal on the cloud. It provides an API, that can be used to control the device remotely though a programming interface. The device supports both SIP, H.323 signaling for call services and BFCP, H.239 for content sharing. The device runs on Android Platform and any service required for the video collaboration can be easily deployed as a application. The SIP call services are integrated with the VCCAS ( Video Conferencing and Collaboration as a Service ) providers like BlueJeans, Videonor, Pexip , Videxio etc.

**Roles and Responsibilities:**

* Automating test cases using Python: Involved creating automated test scripts using the Python programming language to test **SIP, H323** protocol functionality, likely including scenarios such as call setup, teardown, and various **SIP message exchanges** using **Tely device.**.
* **Automating Interop test cases with Cisco, Polycom devices:** Involved creating automated test scripts to ensure interoperability between the system being tested and devices from Cisco and Polycom, likely covering various communication scenarios and protocols.
* Testing services **Bluejeans, Zoom, and Telycloud services** through Tely device.
* **Testing content sharing between Tely devices and non-Tely devices:** Testing the ability to share content (such as screen sharing or presentations) between Tely devices and devices from other manufacturers.
* **Analyzing logs for crashes during testing:** Reviewing logs generated during testing to identify and analyze any crashes or unexpected behavior encountered during test execution.
* Troubleshooting and fixing any issues or failures encountered during the execution of automated test scripts, ensuring the reliability and accuracy of the automation framework.
* **Analyzing Wireshark** captures for H323 call signaling: This involves using Wireshark, a **network protocol analyzer**, to capture and analyze H323 call signaling traffic, helping to diagnose and troubleshoot issues related to call setup and communication.

**Environment:**  Python, unix, Jira, Git, EDL process, Android build load process

**Python Developer at Primesoft IP solutions Duration: Sept 2012 to Dec 2014**

**Project: SHIFT Media Management**

SHIFT, the leading marketing software company for social Advertisers, next generation Twitter ads self-service solution. The Twitter ads solution is part of SHIFT’s Open Marketing Cloud, which provides tools for planning, advertising and analyzing social marketing campaigns for global brands, Including 10 of the top 20 largest advertisers in the world. SHIFT’s proprietary marketing cloud technology enables brands to automate their social marketing campaigns to meet their business objectives across Facebook, Twitter and LinkedIn.

**Roles and Responsibilities:**

* Involved in gathering and comprehending the needs and objectives of the business, ensuring that the development efforts align with the broader goals and objectives.
* Developed backend routes or endpoints that handle requests and responses related to Lead Generation Cards.
* These routes likely facilitate operations such as **creating, updating, retrieving, and deleting** lead generation card data.
* Designed and implemented data models that represent the structure and relationships of data used by the application, specifically to interact with a **MongoDB** database.
* These models define how data is stored, retrieved, and manipulated within the MongoDB environment.
* Configured asynchronous processing mechanisms using technologies such as Redis, RQ (Redis Queue)
* These workers handle background tasks efficiently, allowing the application to offload time-consuming operations and maintain responsiveness.
* Implemented and executed unit tests to verify the correctness and functionality of individual components or units of code within the system. Unit tests ensure that each piece of code behaves as expected in isolation, helping to identify and prevent bugs and regressions.

**Environment:**  Python, unix, Jira, Github, MongoDB, redis, REST APIs, CRUD operations.