Sandeep G

 Sr Python Developer

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**Summary**

* 10 years of experience in software development, encompassing back-end, front-end, business intelligence, databases, and automation frameworks.
* Proficient in the full Software Development Life Cycle (SDLC), including requirement analysis, design, development, testing, and implementation
* Deeper understanding of AI, big data, analytics, &amp; complex software engineering concepts
* Expertise in developing web applications using Python (3.x/2.7), Django, Flask, SQL, WSGI, Typescript, JavaScript, AJAX, HTML5, JSON, and template languages.
* Work closely with the Engineering/Platform and Marketing/Business teams to identify ML and Data Science opportunities to grow LTV and monetization of data and models
* Skilled in MVC architecture with Django and Flask and experienced in Fast API frameworks.
* Proficient in DevOps and automation using Docker, Kubernetes, Open Shift, Ansible, Jenkins, and Octopus Deploy, with experience in CI/CD pipelines using GitHub Actions, TeamCity, and Jenkins.
* Hands-on experience with AWS services (S3, Lambda, SQS, SNS, Redshift, RDS) and cloud orchestration tools like AWS Step Functions, Data Pipeline, and Glue.
* Developed and maintained an in-house ERP system with a Python/Django backend and Django REST Framework API, integrating Angular.js for the front end.
* Skilled in building dynamic, responsive user interfaces using React, with a strong focus on creating interactive Single Page Applications (SPAs) that enhance user engagement and performance.
* Experienced in managing complex application states with Reacts Context API and Redux, ensuring efficient data flow and seamless integration with back-end services.
* Providing technical and analytic direction, guidance and road map on ML projects. Deep technical expertise and strong problem-solving and data analysis skills
* Strong experience with RESTful API design and implementation, following best practices for microservices communication.
* Experience with API development and integration, including working with REST APIs, GraphQL, and OAuth authentication.
* Proficient in containerization and cloud infrastructure, having designed solutions with Docker and Kubernetes.
* Expertise in Python libraries such as Beautiful Soup, NumPy, SciPy, matplotlib, Pickle, and pandas for data analytics and software development.
* Created automation frameworks using Python, Selenium Web Driver, Junit, TestNG, and Jenkins, with experience in Behaviour-Driven Development (BDD/TDD) using Gherkin and Cucumber.
* Implemented a configurable data pipeline using Python, Elasticsearch, SQL, and PostgreSQL for customer-facing data stores.
* Developed and optimized automated ETL pipelines using Apache Airflow, improving data processing efficiency and ensuring reliable data flow across multiple sources.
* Implemented complex workflow orchestration with Apache Airflow, streamlining data ingestion and transformation processes for real-time analytics and reporting.
* Strong grasp of cybersecurity principles.
* Proficient in version control using Git and SVN and experienced with tools like Swagger for API design and documentation.
* Familiarity with OCR (Optical Character Recognition) techniques for extracting and processing text from images and scanned documents.
* Knowledgeable in testing methodologies, including unit, integration, and cross-browser testing with Selenium, and headless-mode testing in Linux/Ubuntu environments.
* Experienced in GUI Automation for various web and desktop applications, ensuring seamless user interface automation.
* Familiarity with SaaS platforms like Salesforce and ServiceNow (optional but beneficial).
* Demonstrated ability to manage and deploy multiple concurrent projects, with strong analytical and problem-solving skills.
* Excellent communication, time management, and organizational skills, capable of working both independently and as part of a team.
* Proficient in PyAuto for automating tasks and interactions with GUI elements using Python.
* Excellent communication, time management, and organizational skills, capable of working both independently and as part of a team.

**Education:** Bachelor of Technology (Electronics & Communication Engineering) - Lovely Professional University, Phagwara, Punjab, 2013, India.

**Technical Skills:**

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| Languages | Python, Java Script, Shell Script, Perl, SQL |
|  Frameworks | Django/ Flask, Robot, Angular JS, Node JS |
| Relational Databases | MySQL, Oracle, PostgreSQL |
| Web Technologies | XML, CSS3, HTML5, JavaScript, Bootstrap, RESTful, AJAX |
| Web Services | SOAP, REST |
| Protocols | TCP/IP, FTP, UDP, Socket Programming |
| Automation Tools | Chef, Jenkins, Ansible, Selenium, GUI Automation, OCR (Optional Character Recognition) |
| SDLC Methodologies | Agile, Waterfall, Scrum |
| No-SQL Databases | MongoDB |
| Testing Tools | QTP, HP QC, Python & Robot Selenium |
| Others | GIT, SonarQube, Swagger UI, Fast API, REDIS, RESTful Web Services, Rabbit MQ, Celery, AWS, GCP, PySpark.  |

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# **Professional Experience**

**Shutterfly, Minneapolis, MN (Remote) Apr 2023 to till date**

**Sr. Python Developer**

**Project:** Networking Application Framework Automation & Simulation Framework.

Abstract: Contributed to Develop python-based automation & simulation framework application to test the networking equipment, which is integrated with end-to-end automation infrastructure using middleware and database. It is a meta-framework that provides an easy-to-use asynchronous programming for the automation and test script developers.

**Responsibilities:**

* Participated in the full Software Development Life Cycle (SDLC) for web applications using Python SDK, Django, TypeScript, HTML5, XML/JSON, and template languages with a focus on secure data handling and integration.
* Developed and integrated dynamic front-end components using React, enhancing the user experience in monitoring and managing networking equipment through responsive, interactive interfaces."
* Collaborated with the front-end team to build and maintain React components that interacted seamlessly with the backend RESTful APIs, ensuring efficient data display and improving application responsiveness and usability for end-users.
* Developed custom Python integrations with SaaS platforms ensuring secure configurations and pulling data directly from SaaS APIs such as Salesforce and ServiceNow, aligning with security requirements.
* Built automation infrastructure in Python for network appliances and virtual systems (Oracle VMs) ensuring secure configurations and monitoring.
* Developed feature-level APIs and multi-server applications using Python, implementing secure RESTful APIs consumed in TypeScript applications for monitoring and managing SaaS platforms.
* Containerized Python microservices using Docker and managed deployment across environments with Kubernetes on RedHat OpenShift, ensuring secure configurations and scalability.
* Developed and maintained server infrastructure on AWS (EC2, EKS, Lambda, DynamoDB, CloudWatch, S3, IAM) securing access and data while deploying applications in Docker containers on GKE (Google Kubernetes Engine) and GCP.
* Worked with PostgreSQL creating Python microservices to handle large data volumes securely and used AWS Glue with PySpark for ETL processes, ensuring the security of data pipelines.
* Integrated PyAuto for automating GUI tasks related to network appliances and virtual systems, improving task efficiency across various environments.
* Conducted UI testing and automation using Selenium integrated with the PyTest framework for automation framework applications, ensuring secure and reliable software updates.
* Implemented GUI Automation to ensure seamless interaction with desktop and web-based applications as part of the overall test automation process.
* Integrated third-party APIs into a microservices architecture ensuring compatibility with Python and TypeScript, with a focus on securing data transmission and API integration.
* Managed asynchronous tasks and offloaded long-running processes using Celery, scheduling tasks securely based on business needs and security requirements.
* Applied OCR (Optical Character Recognition) techniques to extract and process text from images and documents as part of the automation processes.
* Developed and optimized automated ETL pipelines using Apache Airflow, ensuring efficient data processing and reliable data flow across various sources, significantly improving the project's data handling capabilities.
* Implemented complex workflow orchestration with Apache Airflow, automating data ingestion, transformation, and scheduling tasks to support real-time analytics and enhance overall system performance.
* Automated and validated APIs across multiple platforms and wrote Ansible playbooks for network automation ensuring the security of automated configurations.
* Developed and tested asynchronous RESTful APIs using Swagger 2.0, ensuring secure data access and integrity while working with SaaS security platforms.
* Worked with Node.js to configure secure JSON web authentication and authorization, ensuring robust user security.
* Used Gerrit/GitHub for version control, updating, and maintaining web applications based on security project requirements.
* Debugged and fixed issues across frontend and backend modules, provided training to users and supported UI development, ensuring secure bug fixes and enhancements.

**Technologies:** Python 3.8/2.7, PyAuto, Selenium, GUI Automation, OCR, Golang, Django, PyTest, HTML, CSS, Bootstrap, XML, JavaScript, Angular 15, Restful Web Services, gRPC, Robot Framework, Apache Tomcat, Linux, GitHub, Jira, PostgreSQL, AWS cloud services, Linux (RHEL 6/7, Ubuntu 16/18/20, CentOS), Mac, Windows.

**Zachry Construction, San Antonio, TX Nov 2017 to Mar 2023**

**Python Developer**

**Project Summary**: Motivated and experienced Python Developer with a demonstrated track record of success in developing highly scalable applications with improved performance and robustness. Seeking to leverage 3+ years of leading Java-based web development projects to help Zachry constructions achieve success. Seeking to drive business value through code optimization and process automation, ultimately resulting in an improved user experience.

**Responsibilities:**

* Utilized front-end technologies such as HTML5, CSS3, and JavaScript to interact with user interfaces and built robust front-end Single Page Applications (SPA) using Angular 8. Mocked RESTful APIs using Node.js frameworks (Express and Rectify) and Postman.
* Applied design patterns (Singleton, Proxy, Factory, Observer) for middle-tier development and the Composite Pattern for the presentation tier. Implemented logging, security, and error-handling mechanisms using Python's Aspect-Oriented Programming (AOP) concepts.
* Extensive experience using Splunk for high-level health checks on applications and implemented logging with Python logging modules.
* Worked with microservice architecture using Python Flask/Fast API to modularize code, implemented REST APIs, and integrated Swagger for API documentation. Created database schemas and managed privileges using Python scripts.
* Developed procedures, tables, views, packages, triggers, and joins to retrieve database information using SQL Alchemy and raw SQL scripts.
* Implemented Kafka producer and consumer applications on a Kafka cluster setup with the help of Zookeeper using the Python Kafka client.
* Secured REST APIs by implementing OAuth2 token-based authorization using Flask-Security or Django OAuth Toolkit.
* Used SQL Alchemy as an Object Relational Mapping (ORM) tool to persist Python objects on PostgreSQL databases.
* Developed Docker build scripts and implemented Docker containers to create images and dynamically provisioned slaves to Jenkins for CI/CD pipelines. Automated unit tests using the Pytest framework.
* Used AWS S3 to store and retrieve data and utilized Elasticsearch for document search capabilities. Created automated test scripts using Selenium WebDriver and managed projects using Jira and GitLab for issue and bug tracking.
* Conducted unit testing using the Pytest and unit test frameworks and implemented Test-Driven Development (TDD) methodology.

**Technologies:** Python 2.7, Flask, IntelliJ IDE, HTML, CSS, Bootstrap, React JS (Redux & Saga), XML, Robot framework, Pyspark, Apache Tomcat, Linux, Postman, Git, Jenkins, Bit bucket, AWS, MySQL, PostgreSQL, Jira.

**Sabre Holdings, Southlake, TX Dec 2014 to Oct 2017 Sr. Software Programme Analyst**

**Project Summary:** Sabre Holdings is a global technology company whose innovative solutions are used by over a billion people worldwide to plan, book, and access their travel information. As a Senior Software Program Analyst, I contributed to the development of Sabre Reaccommodating Manager, a solution designed to provide efficient reaccommodating services to meet customer needs and contractual obligations while minimizing overall operational costs.

**Responsibilities:**

* Experienced in configuring, customizing, and developing web platforms.
* Web application development using Python, Django, HTML, XML, and template languages.
* Proficient in backend programming with Python and frontend programming with JavaScript.
* Collaborated with business analysts to develop high-quality agile technical specifications for new components.
* Utilized the Flask framework for application development.
* Worked with Palytoxin/Kiosks payment platforms, handling transactions between the client application and the payment database.
* Designed and developed related applications, such as Dashboard Reports.
* Created unit test scripts for every module in the application.
* Developed backend application components for Hypervisor, facilitating events and services communication.
* Implemented communication message bus drivers to send events and services to multiple modules within the project.
* Experienced with using Git for local and remote application development.
* Automated repetitive tasks using the Amazon EC2 command line interface along with Bash and Python.
* Developed a GUI using webapp2 to dynamically display test block documentation and other features of Python code in a web browser.
* Experienced with Amazon Web Services (AWS) Cloud services, including EC2, EBS, S3, VPC, CloudWatch, and Elastic Load Balancer.
* Worked with PySpark to read and write multiple data formats, such as JSON, on HDFS.
* Resolved issues related to data conversion, data mapping, application development, resources, server communication, testing, and data from/to vendor systems.
* Wrote SQL queries and implemented functions, triggers, cursors, object types, sequences, and indexes.
* Participated as part of a global development team to ensure successful and timely technical implementations, designs, development, rollout, and support of eCommerce applications and systems globally.
* Skilled in using Python collections for manipulating and looping through different user-defined objects.

**Technologies:** Python 2.7, Flask, IntelliJ IDE, HTML, CSS, Bootstrap, React JS (Redux & Saga), XML, Robot framework, Pyspark, Apache Tomcat, Linux, Postman, Git, Jenkins, Bit bucket, AWS, MySQL, PostgreSQL, Jira.

**Windmind It Software solutions(intern) Hyderabad, India Sep 2012 to Oct 2014**

**Software Programme Analyst**

**Responsibilities:**

* Analysed Test Cases and contributed for creating Test Strategy for the project.
* Involved in project planning, coordination and implemented QA methodology. Participated in Requirement gathering and analysis phases, validated and verified them to ensure success.
* Followed Agile and waterfall development methodologies throughout the SDLC process.
* Involved in design, development, and implementation of various modules for company's core automation products.
* Conducted user evaluation tests to make sure the website's interface is intuitive and effective.
* Wrote Python scripts to manipulate files and update the content in the database.
* Worked on Python NUMPY library to perform various complex operations.
* Involved in writing Python scripts to parse the data in XML & JSON formats and stored in Database.
* Monitor and Troubleshoot OS (Linux) and performance related issues.
* Generated various report using Python Report lab and sent to Business users to improve their decision making.
* Performed functional testing with QTP, defined various checkpoints to verify results and performed tests using test driven data.
* Scripting using Bash script.
* Worked in UNIX environment and familiar with all the commands.
* Provided continued support, maintenance and development of bug fixes and patch sets for existing web applications.

**Technologies:** Python 2.4.3, Django, HTML, CSS, Java, Java script, JQuery, XML, JSON, Shell Scripting, PL/SQL, Oracle 9g, HP QC, QTP, NS2, TCP/IP, UDP.