**Sai**

**Python Developer**

**+1 913-933-5082 Email: kalyan.k@techvorks.com**

**SUMMARY:**

* Around 9+ years of IT experience as a Web/Application Developer and coding with analytical programming using **Python, Django, Flask and C++.**
* Experience object-oriented programming (**OOP**) concepts using **Python, Pyspark, C++ and PHP.**
* Experienced in developing web - based applications using **Python, DJANGO, GTK, QT, C++, XML, CSS3, HTML5, DHTML, JavaScript and jQuery.**
* Experience with **Web Development, Amazon Web Services, Python and the Django framework**.
* Very good experience with cloud platforms like **Amazon AWS** and Google App Engine.
* Experienced in installing, configuring, modifying, testing and deploying applications with **Apache** and Siebel.
* Experienced in **MVW frameworks like Django, Angular.js, Java Script, backbone.js, jQuery and Node.js.**
* Experience in building strong websites confirming **Web 2.**0 standards using Yahoo User Interface (**YUI**) **Framework**, **jQuery, HTML5, XHTML, DHTML & CSS3** to develop valid code and table-free sites.
* Very good Experience **Onshore-offshore** coordination experience in Python and JavaScript.
* Generated computed tables in **Power BI** by using Dax.
* Knowledge in **UXdesign**, **UI** patterns and **UI** applications with the help of Adobe products like Adobe Dreamweaver **CS3, AdobePhotoshopCS3/CS4**, **Adobe Fireworks CS3** and **Adobe Illustrator CS3**. **Dreamweaver, Notepad++.**
* Experienced in **Meteor** web framework written using **Angular.JS 2**
* Proficient with container systems like **Docker** and container orchestration like **EC2 Container Service**, **Kubernetes**, worked with **Terraform.**
* Familiar with **JSON** based **REST** Web services and Amazon Web services.
* Experience in AWS platform and its features including**IAM, EC2**, **EBS**, **VPC**, **RDS**, **Cloud Watch**, **Cloud Trail**, **Cloud Formation** AWS Configuration, **Autoscaling**, **Cloud Front, S3, SQS, SNS, Lambda** and **Route53.**
* Experienced in developing Web Services with **Python** programming language.
* Utilized **Pandas** for efficient data cleaning, transformation, and exploration.
* Managed code versioning with **GitHub, Bit Bucket** and deployment to staging and production servers.
* Deployed Microservices using **Docker** container using Confidential **EC2 container service** and using **AWS** admin console.
* Designed and Developed **ETL** jobs to extract data from Salesforce replica and load it in data mart in **Redshift.**
* Applied **NumPy** for numerical operations and array manipulations, enhancing performance in mathematical computations.
* Experience in connecting **Databricks Structured Streaming** with various data sources **like Kafka, Azure Event Hubs, or Amazon Kinesis.**
* Expertise in Creating, Debugging, Scheduling and Monitoring jobs using **Airflow** and **Oozie**.
* Experience with data modeling concepts (**conceptual/logical/physical/semantic, multi-dimensional models (star, snowflake), normalized/demoralized models**).
* Good knowledge of web services with protocols **SOAP** and **REST**.
* Experienced in **Python's modules NumPy, matplotlibetc.** for generating complex graphical data, creation of histograms etc.
* Wrote scripts and indexing strategy for a migration to Confidential **Redshift** from SQL Server and **MySQL** databases.
* Developed **Python scripts** and **Automation tools** to streamline manual tasks, resulting in a 30% reduction in data entry errors and improved workflow efficiency.
* Strong experience **in Shell Scripting, SQL Server, Linux, and Open stack**.
* Implemented **Python scripts** for web scraping and data extraction, aggregating information from various sources and populating databases.
* Experienced in developing web-based applications using **Python, Django, PHP, XML, CSS, HTML, Java Script and jQuery.**
* Installing, Configuring, and Maintaining File Transfer Protocol (FTP) on Linux and Windows Server.
* Expert in developing web-based applications using **PHP, XML, CSS3, HTML5, DHTML, XHTML, JavaScript and DOM scripting,GraphQL.**
* Experience in **SAML** based **authentication 1.1** and **2.0** using **Ping Federation, Site Minder Federation** and integrate with Site Minder authentication and another adapter.
* Experience in deploying **SAML** based highly available solutions using **Ping Federate** and other security products. Competent with **PHP MyAdmin, MYSQL and SQL Server**.
* Strong understanding of Azure services. Experience working with Azure Functions, Azure Logic Apps, and **Azure DevOps.**
* Familiarity with **Azure App Service, Azure Storage, and** Azure SQL Database
* Experience in SonarQube to perform static code analysis, detect bugs, code smells, security vulnerabilities and enforcing coding standards.
* Experience in writing Sub Queries, Stored Procedures, Triggers, Cursors, and Functions on SQL and **PostgreSQL** database.

**TECHNICAL SKILLS: :**

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| --- | --- |
| Languages | C, C++, Java, Python and PL/SQL, HTML, JSON, XML, C#. |
| Scripting | JQuery, Java Script, AJAX, Shell, CSS, Perl. |
| Frameworks | Django, Flask, Angular JS. |
| Protocols | TCP/IP, HTTP/HTTPS, SOAP. |
| Build/Version Control Tools | Subversion, GIT and CVS, Ant and Maven. |
| Programming Methodologies | Waterfall and Agile. |
| Operating Systems | Windows, Unix, Linux (CentOS and Ubuntu). |
| Databases | Oracle, MySQL, Apache Cassandra, Snowflake |
| Deployment Tools | Amazon EC2, Heroku, Jenkins. |
| Debuggers | Pdb and gdb. |
| IDE Tools | PyCharm, Eclipse, PyStudio, Sublime text. |
| Servers | Apache Tomcat, WebLogic, Jboss. |
| Bug Reporting Tools | JIRA and Bugzilla |
| MS Office Tools | MS Word, MS PowerPoint, MS Excel |
| IAM Tools | Ping Federate 8.3, 7.1 SAML 2.0, OAuth2.0, Kerberos |

**PROFESSIONAL EXPERIENCE:**

**Client: Principal Financial Group, VA. May 2022 - Till Date**

**Role: Python Developer/ API Developer**

**Responsibilities:**

* Responsible for gathering requirements, system analysis, design, development, testing and deployment.
* Developed tools using **Python, Pyspark, Shell scripting, XML** to automate some of the menial tasks. Interfacing with supervisors, artists, systems administrators, and production to ensure production deadlines are met.
* Experience in performance tuning of **Spark**
* Applications for setting right Batch Interval time, correct level of Parallelism and memory tuning.
* Successfully integrated **Python scripts** with **Bash shell commands**, enhancing the functionality and flexibility of automation tasks.
* Developed **Python scripts** for automating system administration tasks, improving efficiency in routine maintenance and troubleshooting.
* Developed **Rest Api** to processes the data from DB to another Rest Service using **GoLang.**
* Proficiency in using **Databricks clusters** for distributed computing.
* Utilized **Terraform** in conjunction with **Python** to automate the provisioning of cloud resources, such as virtual machines, databases, and networking components.
* Maintained comprehensive documentation for **Databricks** workflows, ensuring knowledge transfer and ease of onboarding for new team members.
* Integrated machine learning workflows into **Databricks** notebooks using **Python** and Spark MLlib. Developed and deployed machine learning models within the Databricks environment.
* Integrated **Terraform** scripts into **CI/CD** pipelines using tools like **GitLab** CI, automating the deployment of infrastructure changes.
* Responsible for Installing, upgrading, and configuring **Red Hat Linux servers** using Kickstart file.
* Hands on experience in customizing kernel parameters and user limits in **Linux server** to enhance performance and security.
* Integrated third-party **APIs** and services seamlessly into the **Python API** ecosystem, facilitating data exchange and interoperability with external systems.
* Orchestrated **Python API** gateway configurations and proxy setups to streamline communication between microservices and external clients.
* Implemented request handling logic, data serialization/deserialization, and business logic execution to fulfill **Python API** functionality requirements.
* Worked on AWS Data Pipeline to configure data loads from **S3 to into Redshift**
* Utilized version control systems (e.g., Git) for code management and collaborated with team members using **Agile** methodologies.
* Dockerized applications by creating **Docker images from Docker file.**
* Leverage **Python** for writing unit and integration tests. Python is a versatile language for test automation due to its rich ecosystem of testing libraries.
* Fine-tuned **Python API** response times, throughput, and resource utilization through profiling, caching strategies, code refactoring, and infrastructure optimization initiatives.
* Collaborated with frontend developers to integrate Python applications with web interfaces.
* Automated routine tasks with **Python** scripts within **Function Apps**, enhancing efficiency and reducing manual intervention.
* Developed and maintained **microservices** architecture using **Python** and frameworks like **Flask or Django**, ensuring scalability, reliability, and high performance.
* Designed **RESTful APIs** to enable communication between microservices, adhering to best practices for API design and versioning.
* Deployed **(CI/CD)** practices in **MLOps** ensure thorough testing and validation of models, leading to higher quality and more reliable predictions.
* Configured and managed **Azure Storage Accounts** to store and retrieve data efficiently, ensuring high availability and durability.
* Analyze and Define Updates to **ML Pipeline, Deployment & Monitoring scripts** to accommodate a changes.
* Implemented Python scripts for seamless interaction with **Azure Storage,** automating data transfer and management processes.
* Developed user-friendly **Android apps**, incorporating intuitive user interfaces, navigation, and interactive features to enhance user engagement.
* Developed command-line utilities in **Python** to automate repetitive tasks, enhancing productivity and reducing manual errors.
* Orchestrated **microservices** deployment and management using container orchestration platforms like Kubernetes or Docker Swarm.
* Utilized Python frameworks like **Flask** and **Django** to build web applications and **RESTful APIs,** facilitating data access and interaction.
* Collaborated with cross-functional teams using **Databricks** collaborative notebooks, facilitating real-time collaboration and knowledge sharing.
* Implemented server-side logic and **APIs** using **Node.js**, contributing to full-stack development projects. Developed and maintained dynamic and responsive web applications using **JavaScript** frameworks such as **React.js and Angular.**
* Ensured **API security** and optimal performance in both **Python** and **JavaScrip**t environments. Adhered to coding standards and best practices in both **Python** and **JavaScript,** contributing to maintainable and scalable codebases.
* Developed **Microservices** by creating **REST APis** and used them to access data from different suppliers and to gather network traffic data from servers. Worked with **AJAX** framework to get the asynchronous response for the user request and used JavaScript for the validation.
* Integrated **Databricks** into the development workflow for collaborative coding and version control.
* Designed and executed comprehensive **Test automation** frameworks using tools like Robot Framework and PyTest for functional and regression **Testing.**
* Developed reusable components and services to optimize code maintainability and enhance development efficiency.
* Implemented a Jenkins-based **CI/CD** pipeline for Apache Airflow DAGs, ensuring automated testing, linting, and deployment.
* Leveraged **NumPy** arrays for efficient numerical computations, improving the speed and accuracy of data transformations.
* Regularly reviewed and enhanced **CI/CD** processes based on feedback, performance metrics, and evolving project requirements.
* Utilized **Jira's** documentation features, including wikis and confluence integration, to maintain comprehensive project documentation, user manuals, and knowledge bases, ensuring clear communication and knowledge sharing within the team.
* Managed software releases and versioning using **Jira's** release management functionalities, coordinating feature deployments, hotfixes, and rollbacks to minimize downtime and ensure a smooth release process.
* Collaborate with DevOps teams to align **MLOps processes** with broader organizational **DevOps** practices.
* Implement security measures for **machine learning systems**, including access controls, encryption, and secure communication.
* Conducted statistical analysis using **Pandas** and **NumPy,** extracting meaningful insights from large datasets.
* Applied statistical functions to derive key metrics, contributing to data-driven decision-making processes.
* Proficient in using **Pandas** for efficient data manipulation, cleaning, and transformation tasks in Python. Extensive experience handling large datasets and performing complex operations to extract valuable insights.

**Environment**: Python, Django, Flask, Shell Scripting, AWS, Pandas, PyQt, Ping Federate 7.1 SAML 2.0, SAML1.1PyQuery, Snowflake, Wireshark, Flash, DOM, JSON, PHP, HTML5, CSS3, AJAX, JavaScript, Angular.js, Bootstrap, Apache Web Server, MYSQL, GitHub, LINUX, Airflow.

**Client**: **Delta Airlines, GA Dec 2021 - Apr 2022**

**Role: Python Developer**

**Responsibilities:**

* Participated in requirement gathering and worked closely with the architect in designing and modeling.
* Integrated authentication and user management systems using Python libraries and **React** components.
* Implemented robust and scalable ETL processes, ensuring data consistency and reliability.
* Conducted performance tuning exercises on **Databricks** clusters, optimizing Spark jobs for enhanced processing speed.
* Implemented **Python scripts** with **Pandas** for automated report generation, providing stakeholders with timely and accurate insights.
* Implemented best practices for resource management, resulting in improved overall system efficiency.
* Designed and implemented **data pipelines** with **Delta Lake** integration, ensuring ACID compliance and transactional consistency.
* Created and updated **Control-M** scheduling working with application team and project manager to design complex batch automation.
* Collaborated **with UX/UI designers** to implement user interface designs that align with Android Material Design guidelines.
* Designed and implemented robust backend systems in **GoLang**, including **RESTful APIs** and **microservices** architecture, building upon previous experience with Python frameworks like **Django and Flask.**
* Utilized **GoLang's** goroutines and channels to implement concurrent solutions, drawing upon prior experience with Python's threading and multiprocessing modules.
* Leveraged **Docker and Kubernetes** to containerize and deploy **GoLang** applications, capitalizing on previous experience with containerization gained in Python projects.
* Used **microservice**s and written in **Python** utilizing distributed message passing via Kafka message broker with JSON as data exchange formats. Designed and implemented open-source Al frameworks - **Pytorch**, **TensorFlow**, Scikit-learn, Apache Open Source **(Kafka, Storm. Spark)** for NLP and Machine Learning **Algorithms**
* Implemented **Android** app localization for multiple languages and regions to enhance global accessibility.
* Integrated third-party **APIs and SDKs** for features such as geolocation, push notifications, and social media sharing.
* Led the backend development using **Node.js** to build scalable and high-performance server-side components.
* Implemented schema inference and enforcement in **Databricks Structured Streaming** to maintain data quality and consistency throughout the processing pipeline.
* Developed **RESTful APIs** to facilitate communication between the frontend and backend, ensuring efficient data flow.
* Responsible for Designing Logical and Physical data modelling for various data sources on Confidential **Redshift**
* Integrated third-party **APIs** and services into **SaaS** platforms to enhance functionality and provide seamless user experiences.
* Designed and implemented microservices architecture for **SaaS** solutions, leveraging **Python** frameworks such as **Flask or Django.**
* Developed **RESTful APIs** using **FastAPI** framework to facilitate communication between frontend applications and backend services.
* Leveraged **FastAPI's** asynchronous capabilities to handle high-concurrency scenarios efficiently, improving application performance and scalability.
* Designed and implemented API endpoints with **FastAPI,** including request validation, response serialization, and error handling, following **RESTful** principles.
* Implemented version control practices for **Terraform** configurations, ensuring traceability and rollback capabilities.
* Implemented **DynamoDB** Streams for real-time data processing and integration with other **AWS** services such as **Lambda and Kinesis.**
* Developed DynamoDB queries and scans to efficiently access data based on different access patterns and business requirements.
* Utilized **Python** for custom configuration management tasks, enhancing the flexibility of infrastructure configurations.
* Integrated **Terraform** with **Python** scripts to enhance automation and orchestration capabilities.
* Leveraged **Python** for dynamic generation of **Terraform** configurations, streamlining the management of complex infrastructure setups.
* Worked extensively with **Dimensional modeling, Data migration, Data cleansing, Data profiling,** and **ETL Processes** features for **data warehouses.**
* Experience in writing **ETL jobs** using **Ab Initio.**
* Understand the strengths of each language. **Use C++** for performance-critical tasks, low-level memory manipulation, and complex algorithms. Use **Python** for rapid development, scripting, data analysis, and higher-level logic.
* Implemented logging mechanisms using **Python** logging framework to capture and analyze **API** usage, errors, and operational events for troubleshooting and auditing purposes.
* Spearheaded the development of a robust Python **API** to facilitate seamless communication between front-end applications and backend services.
* Designed and implemented **Python APIs** to expose core functionality to internal and external stakeholders, enhancing interoperability and data exchange.
* Managed **Python API** versioning strategies, including URL versioning, header-based versioning, or semantic versioning, to support backward compatibility and facilitate gradual updates.
* Leveraged **Jira** to track tasks, user stories, and bugs throughout the software development lifecycle, providing real-time visibility into project progress and identifying potential bottlenecks or blockers.
* Rewrite existing Java application in **Python** module to deliver certain format of data.
* Wrote **Python scripts** to parse **XML** documents and load the data in database.
* Generated property list for every application dynamically using Python.
* Also used Bootstrap and **Angular.js** as a mechanism to manage and organize the **HTML** page layout.

**Client: Techgene, India Feb 2015 - July 2021**

**Role: Python Developer**

**Responsibilities:**

* Participated in requirement gathering and worked closely with the architect in designing and modeling.
* Developed entire frontend and backend modules using **Python on Django Web Framework**.
* Performed testing using **Django’s Test Module.**
* Ensured data security and compliance with industry regulations by implementing data encryption and access controls for sensitive data shared between **SAS and Python** environments.
* Used **Django** configuration to manage **URLs** and application parameters.
* Involved in Web development, programming, and engineering **Django, UWSGI** and **SQL** internal admin tools behave **BDD**.
* Implemented **Python scripts** to integrate healthcare data from disparate sources such as Electronic Health Records (EHR) systems, medical devices, and health monitoring platforms, ensuring interoperability and data consistency.
* Designed and implemented **Python-based** clinical decision support systems to assist healthcare professionals in diagnosing diseases, prescribing treatments, and managing patient care.
* Utilized **Python** libraries such as OpenCV, scikit-image, and PyDICOM to develop medical imaging analysis algorithms for tasks such as image segmentation, feature extraction, and pattern recognition.
* Developed **Python-based** telemedicine solutions for remote patient monitoring, teleconsultation, and telehealth services, enabling healthcare providers to deliver virtual care and engage with patients remotely.
* Handled deprecation of outdated **Python API** versions gracefully, communicating changes to consumers and providing migration paths to newer versions.
* Utilized performance monitoring tools like New Relic or Datadog to analyze **Python API** performance metrics, identify performance bottlenecks, and optimize critical paths.
* Fine-tuned **Python API** response times, throughput, and resource utilization through profiling, caching strategies, code refactoring, and infrastructure optimization initiatives.
* Leveraged asynchronous programming techniques using asyncio or libraries like Celery to enable concurrent request processing and improve **Python API** responsiveness.
* Used the **AWS -CLI** to suspend on Aws Lambda function used **AWS CLI** to automate backup of ephemeral data stores to S3buckets EBS.
* Successfully developed and maintained **AWS**-integrated applications, leveraging Boto3 for seamless interaction with various **AWS** services.
* Performed Data manipulation and wrangling using python libraries like **Numpy and Pandas.**
* Perform Data Cleaning, features scaling, features engineering using **Pandas** and **NumPy** packages in Python.
* Worked on outlier detection with data visualizations using boxplots, feature engineering using KNN distances using **Pandas, NumPy** packages in Python.
* Analyzed existing **SQL queries** to identify opportunities for improvements.
* Built RESTful APIs with Python frameworks like **Django and Flask,** enabling efficient data retrieval and management.
* Designed and implemented database schemas, tables, and relationships using **Oracle SQL** Developer or similar tools, ensuring efficient data storage and retrieval.
* Created and optimized stored procedures, functions, and triggers in **Oracle PL/SQL** to encapsulate business logic and improve application performance.
* Implemented continuous integration/continuous deployment **(CI/CD)** pipelines for automated testing and deployment of **Machine learning models**.
* Employed **Pandas capabilities** within **Python scripts** for data cleansing and transformation, enhancing data quality and integrity in automated workflows.
* Leveraged **Python's** ability to execute **SQL** statements dynamically to call stored procedures and functions from **Python code**, enhancing application functionality.
* Extracted and analyzed data from **Oracle databases** using **Python** libraries such as **pandas, numpy,** or matplotlib, to generate insights, trends, and reports for decision-making purposes.
* Designed and implemented frontend components with React.js, ensuring responsive and dynamic user interfaces.
* Utilized **Terraform** in conjunction with **Python** to automate the provisioning of cloud resources, such as virtual machines, **databases**, and networking components.
* Applied infrastructure design patterns to ensure resilience, high availability, and security in cloud environments.
* Deployed and tested different modules in **Docker containers and GIT**. Implemented programming automations using **Jenkins** and **Ansible** on **Unix/Linux based OS over cloud like Docker.**
* AWS Kinesis Streams, AWS Step Functions (Serverless) Pipelines, AWS Kinesis Streams, Google TensorFlow, AWS Step Functions (Serverless) Pipelines, AWS Kinesis Streams, AWS Kinesis Streams Data Analytics Streaming SQL (AWS EKS) | Pipelines.
* Created Terraform scripts for **EC2** instances, Elastic Load balancers and **S3 buckets**. Implemented Ter **AWS** infrastructure and managed servers using configuration management tools like **Chef and Ansible**
* Conducted performance tuning and troubleshooting of **PySpark** jobs, reducing runtime, and enhancing overall system efficiency.
* Implemented optimizations for resource management, improving overall job stability.
* Implemented cutting-edge data analytics algorithms using **PySpark,** contributing to actionable insights from massive datasets.
* Utilized **FastAPI's** WebSocket support to implement real-time communication features in applications, such as chat applications or live data updates.
* Integrated **FastAPI** with other **Python** libraries and frameworks, such as Pydantic for data validation and marshalling, or Celery for background task processing.
* Utilized **FastAPI's** Implemented **AWS** Secrets Manager to adhere to security best practices, ensuring that secrets are securely stored, access is restricted, and auditing is enabled for compliance.
* Fine-tuned **Pandas** code for memory efficiency, enabling the analysis of large datasets without compromising performance.
* Integrated **AWS** Secrets Manager with applications, enabling them to retrieve secrets dynamically at runtime, reducing the risk of hardcoded credentials.
* Created and managed **AWS** Identity and Access Management (IAM) roles and policies to control access to secrets stored in **AWS** Secrets Manager
* Worked collaboratively with cross-functional teams to integrate **Pandas** and **NumPy** functionalities into end-to-end data solutions.
* Contributed to the development of data-driven applications, ensuring seamless integration of data processing and analysis components.
* Documented codebase for **Pandas** and **NumPy** implementations, promoting best practices and facilitating knowledge transfer within the team.
* Conducted training sessions to share insights into effective usage of **Pandas** and **NumPy** for data-centric tasks.
* Designed and developed data management system using **MySQL**.
* Created a **Git** repository and added the project to **GitHub**.
* Build development environment with **JIRA**.

**Environment:** Python 2.7, Django 1.4, Java, Angular.js, Bootstrap, AWS, Bash, PyQt, XML, Shell Scripting, MySQL, HTML, XHTML, CSS, AJAX, JavaScript, Jenkins, Apache Web Server.

**EDUCATION**

**Alliant international university, CA**

*Master’s in information systems and technology -2022*

**Osmania University, HYD, India**

*Bachelors of Degree -2015*