Kalyan Gaddala   **Sr Python Full Stack Developer**

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Professional Summary:

Sr Python Full Stack Developer with over 10 years of experience in various programming languages and in designing, developing, and implementing applications using **Python, Django, Flask, and Pyramid**. Proficient in client-server technologies and **RESTful services** across **AWS** and **GCP**. Led successful transitions from **monolithic architectures** to **microservices** utilizing **Python** and **Docker**. Skilled in creating **dashboards, user interfaces, APIs, data pipelines, and implementing predictive analytics and machine learning algorithms.** Proficient in visualization tools such as **Tableau, Power BI**, and the **ELK stack**, effectively communicating data-driven insights to stakeholders.

Skills:

- **Languages**: Python, Python 3.4, HTML5, Java, PL/SQL, Perl, PHP
- **Python Libraries:** Requests, Scrapy, wxPython, Pillow, SQL Alchemy, Beautiful Soup, Twisted, NumPy, SciPy, matplotlib, Pygame, Pyglet, PyQT, PyGtk, Scapy, Pywin32, ntlk, Nose, SymPy, Ipython, PySpark, Pydrill.
- **Frameworks**: Flask, Django, Scrappy, Tornado
- **Scripting languages:** JavaScript, TypeScript
- **Cloud Platforms**: Amazon Web Services (AWS), GCP
- **Big Data Technologies**: Hadoop, HDFS, Sqoop, Hive, Pig, Spark, Kafka
- **Containerization and Orchestration**: Docker, Kubernetes, AWS ECS, EKS
- **Continuous Integration and Deployment**: AWS Code Pipeline, AWS Code Build, Jenkins, Maven, ANT,
- **Data Warehousing**: Snowflake, RedShift
- **Development Tools and IDEs**: IntelliJ IDEA, Eclipse, PyCharm
- **Version Control**: Git, GitHub
- **Web/ App servers:** WebSphere, WebLogic, Tomcat, Apache server, NGINX
- **Testing Frameworks**: PyUnit, PyTest, Mockito
- **APIs and Web Services**: AJAX, JSON, SOAP, REST, WSDL, XML, XSD, XSL, XSLT, HTML5, XHTML, DHTML, CSS3, jQuery
- **Databases**: MySQL, PostgreSQL, SQL Server, Oracle11g, MongoDB, DynamoDB**,** Redis
- **Security and Access Control**: AWS IAM, JWT
- **Monitoring and Analytics**: Tableau, Power BI, ELK, Splunk
- **Infrastructure as Code and Automation**: Terraform, Ansible
- **Operating Systems:** XP, windows, Linux, Unix, Ubuntu, JavaScript, Unix Shell Scripting
- **Project Management and Collaboration**: JIRA, Agile/Scrum methodologies, Confluence

Responsibilities:

- Python and Django developer with expertise in WAMP (Windows, Apache, MySQL, Python) and LAMP (Linux, Apache, MySQL, Python) architectures.
- Experienced in developing Web Services using Python, with strong knowledge of SOAP and REST protocols.
- Proficient in Python object-oriented programming, including creating classes, constructors, overloading, and modules. Applied OOPs principles to design and implement scalable and maintainable code structures.
- Developed comprehensive frontend and backend modules using Python on Django, Flask, and Pyramid frameworks.
- Knowledgeable in continuous deployment with Heroku and Jenkins.
- Experienced in gathering functional and non-functional requirements. I have a strong understanding of GitHub APIs and workflows.
- Implemented generative adversarial networks (GANs) to create synthetic data, improving model training efficiency and accuracy.
- Optimized I/O-bound operations such as database access and external API calls using async/await and AsyncPG for PostgreSQL, enhancing API throughput

- Designed non-blocking file processing systems using async file I/O (aiofiles), significantly reducing read/write latency for large datasets.
- Proficient in front-end and back-end development, with skills in Python, Django, AJAX, HTML5, CSS3, JavaScript, Bootstrap, jQuery, Angular 8, AngularJS, Node.js, and Express.js.
- Experience writing test scripts, test cases, test specifications, and coverage and implementing the unit tests using Python Unit Test (PyUnit) library.
- Experience in working with various Python IDE's using PyCharm, Spyder, PyStudio, PyScripter, and PyDev. Experience in building frameworks and automating complex workflows using Python for Test Automation.
- Integrated AWS API Gateway with Python-based microservices to enable seamless communication between cloud-native applications.
- Experience in best practices and design patterns for Data Lake, enterprise data warehouse, and Big Data architecture using Hadoop (including Hortonworks, Cloudera).
- Implemented best practices and design patterns for data lakes, enterprise data warehouses, and domain-specific data marts, as well as for Big Data architectures such as Hadoop on Hortonworks, and Cloudera. Also optimized performance by understanding and applying DRAM protocol principles.
- Proficient with editors such as Eclipse, PyCharm, PyScripter, Notepad++, and Sublime Text.
- Python Developer with hands-on experience in Big Data, Cloud, DevOps, data warehousing, data modelling, data marts, data visualization, reporting, data quality, and data virtualization.
- Experience with container-based deployments using Docker, including working with images, Docker Hub, Docker Compose, Docker Registries, and Kubernetes..
- Experience managing the end-to-end process from requirements gathering to implementation, utilizing software development methodologies such as Agile, Scrum, Test-Driven Development (TDD), and Data Pipeline MLops.
- Skilled in design, development, and implementation with a focus on Continuous Integration and Continuous Deployment (CI/CD).

Project Highlights:

Sr Full Stack Python Developer
Client: CBRE, Dallas, Texas.   **July 2023 - Present**

Responsibilities:
- Develop consumer-based features and applications using Python, Django, HTML, Behaviour Driven Development (BDD) and pair-based programming.
- Used Test driven approach for developing the application and implemented the unit tests using Python Unit test framework and Development of Isomorphic ReactJS and Redux driven API client applications.
- Developed backend web services using Node.js and stored dependencies using Node Package Manager (NPM).
- Used jQuery and AJAX calls for transmitting JSON data objects between front end and controllers and utilized continuous integration and automated deployments with Jenkins, Ansible and Docker.
- Involved in building database Model, APIs and Views utilizing Python, to build an interactive web-based solution.
- Integrated Kafka with Async Consumers in Python, enabling real-time event-driven processing with minimal latency.
- Designed and managed API system deployment using fast http server and Amazon AWS architecture.
- Developed frontend and backend modules using Python on Django including Tasty Pie Web Framework using Git.
- Collect data that introspects the performance of query and update operations on a MongoDB instance.
- Developed Ruby/Python scripts to monitor health of Mongo databases and perform ad-hoc backups using Mongo dump and Mongo restore.
- Designed and deployed secure, scalable RESTful APIs using AWS API Gateway, integrating with Lambda, DynamoDB, and S3 for serverless applications.
- Designed and developed dynamic and responsive UI components using React.js and TypeScript, ensuring a seamless user experience across ETF applications.
- Worked in DevOps group running Jenkins in a Docker container with EC2 slaves in Amazon AWS cloud configuration. Also gained familiarity with supporting technologies like Kubernetes and Mesos.
- Used regular expression for faster search results in combination with Angular2 built-in and custom pipes.
- Automated AWS operations using Boto3, including S3 file uploads/downloads, DynamoDB queries, and Lambda function triggers, streamlining cloud workflows.

- Build Cassandra queries for performing various CRUD operations like create, update, read and delete, also used Bootstrap as a mechanism to manage and organize the html page layout.
- Managed, developed, and designed a dashboard control panel for customers and Administrators using Django, Oracle DB, PostgreSQL, and VMWare API calls.
- integrated Java applications with Oracle 11g using JDBC, ensuring efficient data retrieval and transaction management.
- Involved in development of Python based Web Services using REST for sending and getting data from the external interface in the JSON format and perform analysis using Django, PostgreSQL.
- Designed automation scripts to back up the old records by using Mongo DB export command and transferred the files into backup machine with the help of ftplib.
- Developed and maintained data processing pipelines using Python, leveraging libraries such as Pandas, NumPy, and SciPy for efficient data manipulation and analysis.
- Integrated AWS Aurora for scalable database management, implementing optimized SQL queries for efficient data retrieval.
- Designed and implemented GraphQL APIs using Graphene-Python and AWS AppSync, enhancing data retrieval efficiency and flexibility.
- Built secure client-server communication protocols using HTTP/HTTPS, SNMP, SSH, NETCONF, and Telnet to support distributed systems.
- Implemented BDD frameworks like Cucumber to streamline automated testing in Agile workflows.
- Managed datasets using Panda data frames and MYSQL. Queried the database queries using Python.
- Designed database Model, APIs and Views utilizing Python to build an interactive web-based application.
- Developed entire frontend and backend modules using Python on Django including Tastypieweb Framework using Git, Node JS, underscore JS, Angular JS, CSS and JavaScript.

Environment: Python 3.0, 2.7, Django, Boto3, My SQL, Windows, Lambda, Linux, AWS, HTML, CSS, J Query, JavaScript, Apache, Linux, Redshift, Quality Center.

Sr Full Stack Python Developer
Client: Cardinal Health, Dublin, Ohio   **Feb 2020 – Jun 2023**

Responsibilities:
- Responsible for gathering requirements, system analysis, design, development, testing and deployment
- Developed and maintained scalable web applications tailored to healthcare industry requirements, utilizing Python, Django, and React.js.
- Wrote Python routines to log into the websites and fetch data for selected options and used Python modules such as requests, urllib, and urllib2 for web crawling and performed.
- Designed and implemented RESTful APIs to facilitate seamless integration with internal and external healthcare systems, ensuring compliance with industry standards and regulations.
- Led the migration of legacy healthcare applications to a microservices architecture, improving system efficiency and scalability.
- Collaborated with data scientists to develop predictive analytics models that enhanced patient care and operational efficiency.
- Utilized cloud services, including AWS Lambda, S3, and EC2, to deploy and manage healthcare applications, ensuring high availability and reliability.
- Used jQuery and AJAX calls for transmitting JSON data objects between front end and controllers and utilized continuous integration and automated deployments with Jenkins, Ansible and Docker.
- Involved in development of Web Services using SOAP for sending and getting data from the external interface in the XML format.
- Integrated AWS API Gateway, Lambda, S3, DynamoDB, and SNS/SQS to build serverless applications with high availability and scalability.
- Developed web applications and RESTful web services and APIs using Python Flask, Django and PHP.
- Worked in stages such as analysis and design, development, testing on Jenkin using local server and debugging.
- Integrated Spring Boot applications with Oracle 11g using Spring Data JPA, ensuring efficient database transactions and CRUD operations.
- Imported SSL certs from other hosts to new host and properly configured Apache to use certs.

- Created optimized SQL queries for AWS Aurora and PostgreSQL, enhancing application performance and reliability.
- Designed and developed RESTful and GraphQL APIs using FastAPI and Flask, ensuring high-performance data exchange.
- Creating Amazon EC2 Cloud Instances using Amazon Web Services and configuration of launched instances with respect to specific applications.
- Created Python and Bash tools to increase efficiency of call center application system using Java Script, JSP, CSS and troubleshoot various issues in Python code and fix them with code enhancements- code used various python libraries
- Implemented MVC architecture in developing the web application with the help of Django framework.
- Developed and optimized PL/SQL stored procedures, triggers, and functions in Oracle 11g to handle complex business logic for Java-based applications.
- Responsible for writing/modifying scripts using and Bash for day-to-day administration.
- Developed entire frontend and backend modules using Python on Django including tastypie Web Framework using Git.
- Implemented continuous integration and continuous deployment (CI/CD) pipelines using Jenkins and Docker, streamlining the deployment process and reducing time to market.
- Applied machine learning and data mining techniques to solve complex problems, such as diagnostic errors and medical errors, with the goal of improving clinical outcomes in both clinical practice and research settings
- Ensured data security and patient privacy by implementing robust authentication and authorization mechanisms in compliance with HIPAA regulations.
- Developed automated data pipelines for processing and analyzing large volumes of healthcare data, supporting data-driven decision-making.

Environment: Python, Django, React, HTML/CSS, Java, MySQL, REST Web Services, JavaScript, Jupiter, Anaconda, Docker, XL release, NumPy, Pandas, JSON, PyCharm, Linux, Shell Scripting, TDD, Ansible, GitHub, Tableau, Version One (ALM), GIT, AWS, Snowflake, SQL Server 2000/2005, Reporting Services (SSRS**)**

Full Stack Python Developer
Client: Progressive Insurance, Mayfield, Ohio   **Aug 2018 – Jan 2020**

Responsibilities:
- Migrated 9 microservices to Google Cloud Platform from skava and have one more big release planned with 4 more microservices.
- Working on the migration of mobile application from skava to cloud (Google Cloud) by making the chunk of code to microservices.
- Involved in CI/CD process using GIT, Nexus, Jenkins job creation, Maven build and Create Docker image and use the docker image to deploy in gcloud clusters.
- Extensive Knowledge and hands-on experience implementing PaaS, IaaS, SaaS style delivery models inside the Enterprise (Data center) and in Public Clouds using like AWS, Google Cloud, and Kubernetes etc.
- Provisioning environments for Engg and QA as per the requirements and chasing timelines.
- Hands-on experience setting up Kubernetes (k8s) Clusters for running microservices. Took several microservices into production with Kubernetes backed Infrastructure.
- Very good understanding of Microservices architecture, adapting Industry best practices for Microservices while we break down existing apps into micro services.
- Created dynamic routing/load balancing capability enabling large application scaling, used ingress rules and Ingress Controllers - Nginx.
- Point team player on Kubernetes for creating new Projects, Services for load balancing and adding them to Routes to be accessible from outside, Creation of Pods through new application and control the scaling of pods, troubleshooting pods through ssh and stackdriver/splunk logs.
- Worked on Data transfer from Google Cloud environments to Hadoop HDFS and Hive and Worked on Compute Engine, App Engine, Container Engine, Cloud Storage, Cloud SQL, Cloud Datastore, Cloud BigTable, BigQuery, Cloud DataFlow, Cloud DataProc, Cloud DataLab, Cloud Pub/Sub, Cloud Endpoints, and the Cloud SDK.
- Orchestrated CI/CD processes by responding to Git triggers, human input, and dependency chains and environment setup.

- Provide the permissions and required access to all the pub/subtopics and sinks to push/write the data to Stackdriver.
- Setup Alerting and monitoring using Stackdriver in GCP.
- Create custom log metrics using Stackdriver logging and create charts and alerts using the custom log metrics.
- Developed a continuous deployment pipeline using shell scripts in Jenkins.
- Containerized all the ticketing related applications - Spring Boot Java and Node.js applications using Docker.
- Working with engg and upstream teams like Open API on day-to- day environment issues on DEV and TEST env.
- Scheduled, deployed and managed container replicas onto a node cluster using Kubernetes.
- Help provision and manage gcloud container clusters with Chef and Puppet.
- Deployed microservices in Prod.
- Trained staff on Kubernetes administration.

Environment: Google Cloud Platform (GCP), Kubernetes, GitHub, Jenkins, Docker, JIRA, Unix/Linux CentOS 7, Nexus V3, Bash Shell Script, Python, Node.js, Apache Tomcat, MongoDB, SQL, Nginx, RHEL 7, Stackdriver, Splunk, Cavisson, ServiceNow.

Client: Centene Corp, St. Louis, Missouri   **Jan 2016 – Jul 2018**
Python Developer

Responsibilities:
- Design, implement and maintain all AWS infrastructure and services within a managed service environment.
- Worked on data governance to provide operational structure to previously ungoverned data environments.
- Involved in ingestion, transformation, manipulation, and computation of data using kinesis, SQL, AWS glue and Spark
- Participated in the requirement gathering sessions to understand the expectations and worked with system analysts to understand the format and patterns of the upstream source data.
- Done data migration from an RDBMS to a NoSQL database and gives the whole picture for data deployed in various data systems.
- Designed and implement end-to-end data solutions (storage, integration, processing, and visualization) in AWS.
- Hands on Experience in migrating datasets and ETL workloads with Python from On-prem to AWS Cloud services.
- Developed PySpark based pipelines using spark data frame operations to load data to EDL using EMR for jobs execution & AWS S3 as storage layer.
- Enterprise Data Lake was designed and set up to enable a variety of use cases, covering analytics, processing, storing, and reporting on large amounts of data.
- Collaborated with the clients and solution architect for maintaining quality data points in source by carrying out the activities such as cleansing, transformation, and maintaining Integrity in a relational environment.
- Create and setup self-hosted integration runtime on virtual machines to access private networks.
- Working on building visuals and dashboards using Power BI reporting tool.
- Built Apache Airflow with AWS to analyze multi-stage machine learning processes with Amazon SageMaker tasks.
- Developed streaming pipelines using Apache Spark with Python.
- Designed and developed Security Framework to provide fine grained access to objects in AWS S3 using AWS Lambda
- Used AWS EMR to move large data (Big Data) into other platforms such as AWS data stores, Amazon S3 and Amazon Dynamo DB.
- Developed AWS lambdas using Python & Step functions to orchestrate data pipelines.
- Created PL/SQL packages and Database Triggers and developed user procedures and prepared user manuals for the new programs.
- To meet specific business requirements wrote UDF's in Scala and PySpark.
- Worked in Agile environment and used rally tool to maintain the user stories and tasks.
- Worked on Informatica tools such as power center, MDM, Repository manager and workflow monitor.

Environment: AWS EMR, S3, RDS, Redshift, Lambda, Boto3, DynamoDB, Amazon SageMaker, Apache Spark, HBase, Apache Kafka, HIVE, SQOOP, Map Reduce, Apache Pig, Python, Tableau, UNICA, Kibana, Informatica.

Client: AutoZone, Memphis, TN   **May 2015 - Dec 2015**
Mainframe Python Developer
Responsibilities:

- Performed unit testing of Deposit applications, utilizing various programming platforms and review results for accuracy.
- Mainframe Technologies including different Platform (OS), Languages, Databases and Tools with special expertise in COBOL, JCL, DB2, IMS DB, VSAM, CICS, Oracle, Easytrieve, CMAN, XML, File - Aid, MQSeries, RDZ, RTC, DB2 Stored Procedure, Python, Java, AWS, which includes an application design, Programming, Trouble Shooting and Testing.
- Detailed understanding of Hadoop MapReduce Programming, Hive, PIG, HBASE, Tableau, Splunk and generating reports using Python Matplotlib.
- Executed many Business-Critical Projects, involved in the Migration of NW and CA Projects related changes for Consumer and Deposit Application.
- Collaborated with business lines to understand business requirements and participate in development for SDLC documentation.
- Develop Python and UNIX scripts using SQL and HIVE to generate daily and monthly reports for third parties.
- Automated validation checks of weekly report using SQL and Python Scripts.
- Evaluated and implemented enhancement design solutions to improve cost, quality and performance of software applications.
- Assisted testing team in development and execution of test plans for Deposit reporting application.
- Part of the production support team involved in the timely resolution of production problem tickets (Severity 1 & Severity 2) and maintenance ticket both batch and Real time for the Savings Deposit Reporting Application.
- Adhered to defined processes and procedures to ensure the quality of the technical solution.
- Prepared and participated in code reviews as requested.
- Modified test data and created new test data to ensure successful results of modifications to program code.
- Performed regression testing where applicable to ensure current changes have not impacted existing processing.
- Participated in the setup and support of the production environment.
- Provided 24/7 on-call support on a rotating basis in support of application and system availability.
- Assisted in troubleshooting and resolving technical issues causing the unavailability of applications for users.
- Documented the cause and resolution of outages in the databases.
- Thoroughly documented code changes.

Environment: Cobol, JCL, Rexx, Fileaid, Vsam, Sort, Ca7, Changeman, IBM Utilities