Sushmitha R Mamilla Sr. Python AWS Developer

# PROFESSIONAL SUMMARY:

* Highly skilled Python AWS Developer with 9+ years of experience in design, development, implementation, and maintenance of cloud-native, ML-powered, and web-based applications. Extensive expertise in building scalable Python solutions, architecting containerized microservices with AWS and GCP, automating workflows using Kubeflow, Airflow, and Argo, and deploying deep learning models using TensorFlow, Keras, and PyTorch. Proficient in full-stack development, MLOps pipelines, infrastructure as code (IaC), and CI/CD practices. Known for delivering robust, production-grade solutions while adhering to Agile methodologies and PEP 8 standards.
* Good experience in working with AWS Services like AWS EC2, S3, Athena, Event Bridge, VPC, SES, ELB, EBS, RDS, Glacier, Dynamo DB and Cloud Formation.
* Experienced in developing web-based applications using Python, Django, XML, CSS, HTML, DHTML, JavaScript and jQuery.
* Proficient in deploying and managing containerized applications using Amazon EKS, enhancing deployment workflows and ensuring high availability and scalability.
* Experience in working with several python libraries including Pandas, NumPy, matplotlib, SciPy, SQL Alchemy.
* Good Knowledge of Python and Python Frameworks Boto3, Django, Webapp2 and Flask.
* Experience developing full-stack applications integrating **GraphQL, REST APIs, TypeScript, and Angular**.
* Extensive experience with **Pandas** for data manipulation, cleaning, and analysis, ensuring data integrity and efficient transformations.
* Expertise includes integration with CMS platforms like WordPress and Drupal for scalable content delivery and implementing secure authentication and user management using Okta for SSO and access control.
* Worked with Tableau reporting and analytics like designing reports and dashboards.
* Experience in writing Sub Queries, Stored Procedures, Triggers, Cursors, and Functions on MySQL and PostgreSQL database.
* Proven ability to implement Infrastructure as Code (IaC) strategies using AWS CDK and CloudFormation to enhance deployment workflows.
* Experience working experience on all phases of Software Development Life Cycle (SDLC), its methodologies such as Agile, SCRUM and Waterfall Model.
* Experienced in configuring auto scalable and highly available microservices set with monitoring and logging using AWS, Docker and Jenkins.
* Strong experience writing API’s and Web Services in PHP and in Python.
* Sound Knowledge on RDBMS concepts and extensively worked with Oracle, SQL Server 2008, MySQL.
* Excellent communication, interpersonal and analytical skills, and a highly motivated team player with the ability to work independently.
* Ability to learn and adapt quickly to the emerging new technologies and paradigms.

# TECHNICAL SKILLS:

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| **Programming Languages** | Python-3.12, Golang, C, C++, R, JavaScript and Unix/Linux Shell Scripting. |
| **Python Libraries** | Pandas, NumPy, Matplotlib, Pickle, SciPy, PyTables. |
| **Frontend Technologies** | Angular, React.js, GraphQL, TypeScript, JavaScript, HTML, CSS, Bootstrap. |
| **CMS Platforms** | WordPress, Drupal |
| **AI/ML Frameworks** | TensorFlow, Keras, PyTorch, Kubeflow, Argo Workflows. |
| **Identity & Access Management** | Okta |
| **Frameworks** | Boto3, Django, FastAPI, Spark, Pyramid, Flask. |
| **BI Tools** | Tableau, AWS QuickSight, PowerBI, MS Excel. |
| **Technologies** | HTML, CSS, DOM, SAX, jQuery, AJAX, XML, AngularJS. |
| **Big Data Technologies** | PySpark, Databricks, Apache Spark. |
| **IDE's/ Development Tools** | Visual Studio Code, NetBeans, Android Studio, PyCharm, Eclipse and Sublime Text. |
| **Version Control** | GIT (GitHub), SVN |
| **Testing** | SonarQube, Cucumber, Cypress |
| **Methodologies** | Agile, Scrum and Waterfall |
| **Databases** | SQL Server, MySQL, Oracle, PostgreSQL |
| **Cloud Platforms** | **AWS** - Lambda, EC2, S3, EventBridge, Athena, EKS, ELB, VPC, RDS, AMI, IAM, CloudFormation, DynamoDB and GKE.  **Azure:** Azure ML, Azure Blob Storage, Azure DevOps, Azure Functions. |

**PROFESSIONAL EXPERIENCE:**

**Georgia Technology Authority, Atlanta, GA Dec 2024 – current**

**AWS Cloud Native Software Application Developer**

**Responsibilities**:

* Involved in analysis, specification, design and implementation and testing phases of Software Development Life Cycle (SDLC) and used agile methodology for developing application.
* Worked on the CJEP project to take the current SoftwareAG centric solution and produce a Cloud Native solution in AWS to move and consolidate data for counties that sign-up for the service.
* Worked on designing, developing, and maintaining scalable cloud solutions on the AWS platform.
* Collaborated closely with cross-functional teams in a SCRUM Agile environment to deliver high-quality software solutions that meet business objectives.
* Integrated CMS systems such as Drupal for managing content delivery and ensuring seamless front-end/backend collaboration.
* Collaborated with internal teams to configure and implement Okta for secure Single Sign-On (SSO) authentication and user access control across internal applications.
* Designed, developed, and deployed cloud-native applications on AWS using services such as Lambda, API Gateway, DynamoDB, S3, and others as needed.
* Implement serverless architecture using AWS Lambda functions with Python.
* Built and orchestrated workflows using AWS Step Functions and AWS State Machines.
* Designed, developed, and implemented SOAP-based web services using services technologies.
* Created and managed custom headers for web services to ensure security, authentication, and data integrity.
* Implemented MTOM attachments such as PDF for efficient transmission of binary data in web services.
* Collaborated with Product Owners, Scrum Masters, and other team members to refine user stories and deliver solutions iteratively.
* Ensured code quality, performance, and scalability through automated testing, code reviews, and adherence to best practices.
* Troubleshoot and resolve issues in development, testing, and production environments.
* Worked on tickets monitored on JIRA (Agile).

# Environment: Python 3.12, Drupal, CMS, Okta, Soap Web services, Soap UI, AWS Lambda, S3, EventBridge, IAM, DynamoDB, GIT, Terraform, PEP 8 coding standards, API, JIRA.

**Sam’s Club, Remote Aug 2024 – Dec 2024**

# Sr. Python Developer with GenAI

**Responsibilities**:

* Involved in analysis, specification, design and implementation and testing phases of Software Development Life Cycle (SDLC) and used agile methodology for developing application.
* Participated in requirement gathering and analysis phase of the project in documenting the business requirements by conducting workshops/meetings with various business users.
* Interacted with Walmart engineering teams across geographies to leverage  
  expertise and contribute to the tech community.
* Used **Pandas** for exploratory data analysis (EDA), feature engineering, and data cleaning for ML models.
* Designed and maintained Cucumber BDD test scenarios and contributed to the development of comprehensive test cases and strategies, improving defect detection by 30%.
* Worked with cloud-based technologies in Google Cloud Platform (GCP) such as Big Query for data storage and   
  processing.
* Integrated Contentful headless CMS into the Price Matching GenAI project to manage multilingual content and product descriptions dynamically for LLM training and fine-tuning.
* Integrated Airflow DAGs for orchestration of batch and real-time inference workflows.
* Built custom monitoring solutions on GCP for deployed GenAI and computer vision models to track performance metrics and data drift.
* Worked on Price Matching GenAI Project including Scope Narrow down using Attribute Fuzzy search and Sub-Cat mapping, LLM pipelines using GenAI and Evaluation (metrics).
* Worked on the Price Matching Project including formatting the output into different match types, modularizing the LLM run process, and track LLM token usage in this sprint.

# Environment: Python 3.11, CMS, Pandas, GCP, TypeScript, Angular, Cypress, GIT, EventBridge, CI/CD, Terraform, Open Shift, PEP 8 coding standards, microservices, authentication, authorization, API, Postman, GenAI, NLP, JIRA.

**Verizon Sourcing LLC, FL Nov 2022 – Mar 2024**

**Sr. Python AWS Developer Responsibilities**:

* Involved in analysis, specification, design and implementation and testing phases of Software Development Life Cycle (SDLC) and used agile methodology for developing application.
* Participate in requirement gathering and analysis phase of the project in documenting the business requirements by conducting workshops/meetings with various business users.
* Developed scalable microservices in Python adhering strictly to PEP 8 coding standards.
* Worked on Enhanced Governance Control (EGC) project which is rules integration check for budget control through Ansible API which is called during the CI/CD Process.
* Integrated Okta for user identity management and multi-factor authentication across AWS-hosted applications.
* Developed APIs to connect internal services with CMS (WordPress) for dynamic content delivery and metadata management.
* Handled role-based access control (RBAC) and user provisioning via Okta’s APIs for internal tools.
* Utilized **PySpark** for large-scale data transformation and analysis and developed **PySpark-based ETL pipelines** to process and cleanse large datasets, ensuring high data quality and efficient transformations.
* Used Pandas extensively for data manipulation and aggregation before feeding data into ML models.
* Designed **efficient Pandas pipelines** for batch processing, utilizing parallel processing techniques to speed up computations.
* Integrated **Pandas with PySpark** to handle hybrid data processing workflows in distributed environments.
* Created Lambda API which handles an SQS event message and parses VSAD from the message body. This lambda calculates the cost of resources from Google Cost Estimation API. By checking budget and current usage of a resource, CI/CD build process is blocked for thresholds that don’t meet the criteria.
* Migrated legacy infrastructure to AWS CDK and automated deployment processes using AWS CDK, reducing manual effort and improving deployment accuracy by 30%.
* Worked with internal tools for automating deployment processes to Amazon EKS which enhanced scalability and resilience of the system.
* Developed and maintained serverless applications using AWS Lambda, integrating with various AWS services.
* Designed and implemented multiple RESTful APIs using Node.js and Express for seamless integration between microservices and front-end applications.
* Designed and implemented microservices in Python deployed on Kubernetes clusters.
* Developed dynamic user interfaces using React.js, HTML, CSS, and JavaScript, integrating various third-party APIs and services.
* Designed web applications for internal Verizon teams which were then embedded with AWS QuickSight dashboards in web applications to provide seamless data-driven insights.
* Implemented Kubernetes operators to automate complex application deployments and operations.
* Created RESTful APIs enabling seamless integration with frontend applications and third-party services.
* Used FastAPI for creating robust RESTful APIs, facilitating efficient data retrieval and manipulation. Developed and implemented a suite of microservices using FastAPI, enhancing application’s modularity and maintainability.
* Worked on Rightsizing project, to develop a full-stack solution using Python and Node.js for back-end services and React.js for front-end user interfaces. This project consisted of optimizing cloud resources, automate rightsizing, KPI/Cloud stat collection and automated reports across AWS, OCI, EBS and RDS.
* Utilized JavaScript to work on Regression Automation testing for various modules in the above Rightsizing project using WebDriver IO framework.
* Developed test cases, created test scripts for each test case, executed test cases in the non-prod environment, used qTest for Test Case Management and Allure Reports for Test Reporting as a part of Regression Automation Testing.
* Maintained CI/CD pipelines using AWS Code Pipeline integrated with CloudFormation for seamless, automated software deployments across multiple stages.
* Developed RESTful Microservices using Flask and Django and deployed on AWS servers using EBS and EC2.
* Used REST based Microservices with Rest template based on RESTful APIs and designed, developed, and tested HTML, CSS, jQuery and ReactJS.
* Single Sign-On SSO authentication and authorization using Django.
* Managed and optimized a fleet of EC2 instances for high-traffic web application, reducing costs by 20% .
* Worked on data migration strategies from on-premises databases to AWS RDS and DynamoDB, enhancing

application scalability and performance.

* Created Lambda event triggers based on AWS S3 and EventBridge.
* Utilized AWS CloudFormation and the AWS SAM to automate the deployment of serverless applications.
* Developed customized API with token-based authentication for Django using Rest Framework.
* Wrote Terraform scripts from scratch for building dev, staging and prod environments.
* Worked on Revert Rightsizing Lambda to revert the already rightsized instances by parsing such instances list into JSON file in this Lamba along with JWT token.
* Used Git version control tool to coordinate team-development.
* Worked on creating a popup and a button in the UI for the above Revert Rightsizing functionality which facilitated any selected instances to be pushed into Revert Rightsizing Lambda.
* Created POST API to fetch rightsized instances to populate the above popup in the UI. Also created POST API to submit the selected instances list to Revert Rightsizing Lambda.
* Worked on tickets monitored on JIRA (Agile).

**Environment**: Python 3.4/2.7, Drupal, CMS, Okta,TypeScript, Angular**,** AWS QuickSight, MySQL, Kubernetes, AWS, Kafka, EKS, EventBridge, FastAPI, CI/CD, Terraform, PEP 8, Boto3, Amazon SQS, OCI, EBS, RDS, JavaScript, NodeJS, microservices, vWAF, Docker, HTML, CSS, Javascript, Terraform, React.JS, Bootstrap, qTest, Pandas, ML algorithms.

**Harman international, MI Feb 2020 –Sep 2022**

**Sr. Python AWS Developer Responsibilities**:

* Involved in analysis, specification, design and implementation and testing phases of Software Development Life Cycle (SDLC) and used agile methodology for developing application.
* Participate in requirement gathering and analysis phase of the project in documenting the business requirements by conducting workshops/meetings with various business users.
* Refactored legacy Python codebases to align with PEP 8 coding standards which improved code readability and maintainability.
* Utilized R for statistical analysis, data visualization, and predictive modeling alongside Python.
* Conducted exploratory data analysis (EDA) in R using packages such as ggplot2, dplyr, and tidyr to uncover trends and provide actionable insights.
* Worked on front-end frame works like CSS, Angular JS, Bootstrap for development of Web application.
* Integrated Azure Blob Storage and Azure Functions for scalable data ingestion and preprocessing.
* Used Azure DevOps for source control, automated testing, and continuous deployment of ML pipelines.
* Conducted functional and performance testing of SOAP APIs using SoapUI to ensure reliability and compliance with standards.
* Integrated Node.js back-end services with React.js front-end, ensuring smooth data flow and functionality.
* Worked with the design team to implement user-friendly, interactive web applications with React.js and Bootstrap for responsive layouts.
* Leveraged component-based architecture in React to ensure reusability and maintainability of UI components.
* Used jQuery, JavaScript and Bootstrap for front UI or authentication and verification and CSS for layout.
* Designing, implementing, and maintaining solutions for using Docker, Git and Jenkins for microservices and continuous deployment.
* Collaborated with the security team to enforce MFA and device trust policies using Okta integration with AWS Cognito and custom Lambda authorizers.
* Used Okta Python SDK to build administrative scripts for bulk user updates, login activity reporting, and secure token rotation in CI/CD pipelines.
* Integrated data pipelines with Databricks to enhance data processing speeds and data model performance.
* Designed and optimized SQL queries to improve data retrieval performance.
* Built and maintained web applications using Python and integrated them with PostgreSQL databases.
* Utilized Unix/Linux shell scripting for automation and system administration tasks.
* Automated infrastructure provisioning and management using Terraform for AWS and GCP environments.
* Developed Helm charts to simplify Kubernetes application deployments and manage dependencies.
* Integrated DevSecOps principles in CI/CD pipelines by embedding Python scripts for vulnerability checks and code analysis, reducing vulnerabilities by 30%.
* Developed and maintained REST APIs to support application functionalities and integrations.
* Utilized Airflow for orchestration of complex workflows and ETL processes.
* Integrated FastAPI with various data storage systems to persist and retrieve data from within the microservices.
* Worked on Kubernetes API endpoint in EKS managed AWS console.
* Designed and managed API system deployment using fast http server.
* Implemented spring boot micro services to process the messages into the Kafka cluster setup.
* Designed and developed the UI of the website using HTML, XHTML, AJAX, CSS and JavaScript.
* Using Git version control tool to coordinate team-development.
* Implemented PySpark using Python and utilizing data frames and temporary table SQL for faster processing of data.
* Responsible for debugging the project monitored on JIRA (Agile).

**Environment**: Python 3.4/2.7, AWS, CMS, Okta, S3, Angular, SQL, AWS QuickSight, Tableau, Kubernetes, Kafka, EventBridge, ELB, EKS, Helm, FastAPI, Django, PEP 8, HTML5, CSS, PySpark, Terraform, jQuery, JSON, JavaScript, PostgreSQL, microservices, Docker, Airflow, Ansible, MySQL, JIRA.

**IBM, NY Mar 2018 – Jan 2020**

**Sr. Python AWS Developer Responsibilities**:

* Developed Business Logic using python on Django Web Framework.
* Involved in gathering requirements, system analysis, design, development, testing and deployment.
* Used Boto3 and Django frameworks to develop applications and responsible for both back-end programming and front-end functionality using Ajax, Angular.JS, and other technologies.
* Developed Python batch processors to consume and produce various feeds.
* Involved in building database Model, APIs and Views utilizing Python, to build an interactive web-based solution.
* Designed and implemented scalable data integration solutions using Kafka and EventBridge to handle large volumes of data efficiently.
* Implemented infrastructure as code using Terraform to manage cloud resources and automate deployments.
* Created and managed CI/CD pipelines using Jenkins, ensuring efficient and reliable deployment processes.
* Developed REST APIs to enable communication between various services and applications.
* Monitored and optimized system performance using Grafana and Prometheus.
* Managed Kubernetes clusters on GKE, deploying and scaling applications as needed.
* Created an interactive Tableau dashboard to visualize sales performance across regions, enabling stakeholders to make data-driven decisions and identify growth opportunities.
* Built and maintained web applications using Python and integrated them with PostgreSQL databases.
* Implemented RESTful APIs and integrated third-party services to extend application functionality.
* Conducted unit testing and debugging to ensure code quality and reliability.
* Assisted in the development and maintenance of Python-based applications and scripts.
* Deployed Python-based microservices and ML models to Azure App Services for scalable inference endpoints.
* Utilized Azure Monitor and Application Insights to track ML pipeline performance and detect anomalies.
* Configured Azure Key Vault and managed access control policies for secure data handling and authentication in production environments.
* Assisted in the administration and maintenance of development and production environments.
* Successfully migrated the Django database from SQLite to MySQL with complete data integrity.
* Developed multi-threaded standalone app in Python to view Circuit parameters and performance.
* Wrote a Python module to connect and view the status of an Apache Cassandra instance.
* Developed views and templates with Python and Django's view controller and templating language to create a user- friendly website interface.
* Performed Version control using GIT.
* Developed tools using Python, Shell scripting, XML to automate some of the menial tasks.
* Install, configure, test, monitor, upgrade, and tune new and existing PostgreSQL databases.
* Developed SQL Queries, Stored Procedures, and Triggers Using Oracle, SQL, PL/SQL.

**Environment:** Python 3.4/2.7, Azure, Kubernetes, Kafka, EventBridge, Django, Helm, Terraform, PySpark, HTML, jQuery, Angular JS, XML, GitHub, MySQL, JavaScript, Oracle.

**CYR3CON, Tempe AZ Jan 2016 – Feb 2018**

**Python Developer Responsibilities:**

* Involved in analysis, specification, design, implementation and testing phases of Software Development Life Cycle (SDLC) and agile methodology were used for developing the application.
* Worked as an application developer experienced with controllers, views, and models in Django.
* Used Salt Stack to configure and manage the infrastructure.
* Restful web services using Python REST API Framework.
* Monitor and maintain application infrastructure performance.
* Create and maintain test plans for infrastructure upgrades, patches, and fixes.
* Tested entire frontend and backend modules using Python on Django Web Framework.
* Responsible for handling the integration of database systems.
* Developed microservices in Golang, adhering to best practices for scalability and maintainability.
* Integrated RESTful APIs with frontend frameworks and mobile applications. - Implemented caching strategies in Golang applications to enhance performance and reduce latency.
* Deployed and managed Golang applications on Kubernetes, utilizing Helm for configuration management.
* Participated in the design and architecture of distributed systems, leveraging Golang's strengths.
* Provided mentorship and guidance to junior developers on Golang best practices and coding standards
* Developed Server-side automation using Node JS scripting and connecting different types of SQL and NoSQL stores from Node JS.
* Installed and configured Py Builder for application builds and deploying it.
* Developed and Deployed SOAP based Web Services on Tomcat Server.
* Used Jenkins for continuous integration for code quality inspection and worked on building local repository mirror and source code management using Git hub.
* Used IDE tool to develop the application and JIRA for bug and issue tracking.
* Wrote unit testing codes using unit test, resolving bugs and other defects using Firebug,
* Used JIRA to assign, track, report and audit the issues.
* Used GIT to coordinate team development.

**Environment**: Python, Golang, Django Web Framework, AWS, Kafka, EventBridge, HTML, CSS, NoSQL, JavaScript, jQuery, Sublime Text, Jira, GIT, unit test, Firebug, Web Services.

# EDUCATIONAL QUALIFICATIONS:

MS in Information Systems Technology- Cybersecurity, 2015 4.0/4.0 California State University, San Bernardino

BTech in Electrical and Electronics Engineering, 2014 4.0/4.0 Jawaharlal Nehru Technological University, Hyderabad

# CERTIFICATIONS:

AWS Certified Cloud Practitioner Feb 2024