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Description automatically generatedVeda Kola

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PROFESSIONAL SUMMARY

* AWS Certified **Python Developer** with a passion for **full-stack development,** and **web application deployment,** dedicated in building robust, scalable applications using frameworks and libraries **Django, Flask,** and **Pandas.**
* Proficient in generating business-specific datasets, conducting large-scale **data analysis** using **Python Pandas**, and engineering Python routines to optimize **user experience**.
* Collaborated effectively on **Python** applications for risk management, contributing to the development of **Django-based** web applications and implementing robust client-side validation with **JavaScript**.
* Exhibited expertise in constructing dynamic data tables, leveraging **PyQt** for enhanced user interface, and conducting thorough testing of **RESTful APIs** within **Agile** methodologies.
* Made significant contributions to web application development through **Python scripting** for **data processing** and **visualization**, following Test-Driven Development (**TDD**) practices diligently.
* Conducted **API** testing using tools like **Selenium, Postman**, ensuring the reliability of **RESTful web services**.
* Maintained databases across **MySQL, PostgreSQL** **Graph QL** platforms, ensuring data integrity and performance.
* Deep knowledge of **AWS** services EC2, S3, EKS, RDS, SQS, SNS, Auto Scaling, ELB, DynamoDB, Lambda services.
* Demonstrated proficiency in programming languages such as **Python** and **Ruby,** along with frameworks like **Django**.
* Proficient in development tools **PyUnit, Git, Jenkins** for efficient project management and version control.
* Experienced in **version controls** with **Git, SVN** and **GitHub,** and handled microservices architecture with **Docker, Kubernetes,** maintained infrastructure with **Terraform,** dealt with CI/CD pipeline orchestration using **Jenkins.**
* Experienced in front-end development with **HTML, CSS, JS, ReactJS**, **TypeScript** enhancing UI and interactivity.
* Experienced in using **PyDev, PyCharm** for debugging and worked with **Sublime Text 2, Vim Editors** for coding.
* Skilled in using **Docker** for containerization and **Kubernetes** for orchestration, ensuring scalable, high-performance, and reliable deployments across cloud environments (AWS).
* Proficient in handling microservices using **FastAPI** and **Django**, improving API performance and system modularity.
* Experienced with **PySpark** for large-scale data processing and analysis, optimizing data workflows and enhancing the efficiency of **ETL** processes, handled **ETL** migrations into AWS **RedShift**.
* Demonstrated leadership in managing projects across the software development lifecycle **(SDLC)**, particularly in the development of monitoring and notification tools using **Python**.
* Familiar with **Agile** methodologies, actively participated in sprint cycles, and iterative development processes.
* Worked in diverse Operating Systems like **Windows, Linux**, and **UNIX**, adapting to deployment scenarios.

TECHNICAL SKILLS

|  |  |
| --- | --- |
| **Programming Languages** | Python, Ruby, C, Java/J2EE, JavaScript |
| **Web Technologies** | HTML5, CSS3, XML, Bootstrap3, AJAX, Dom, Springboot, jQuery, GoLang, Angular, Next, Vue.js, Bootstrap |
| **Databases** | SQL, Graph QL, PostgreSQL, MySQL, Oracle DB, MongoDB, Cassandra |
| **Frameworks** | Django, Flask |
| **Tools & IDE** | Visual Studio, Eclipse, PyTest, PyCharm, Xcode, IntelliJ |
| **Python Libraries** | NumPy, Pandas, Matplotlib, SciPy, TensorFlow |
| **Operating Systems** | Windows, Linux, Mac OS |
| **Automation tools** | Jenkins, Selenium, Ansible, Docker, Shell, Kubernetes, Terraform |
| **Methodologies** | Agile, Waterfall |
| **Cloud services** | AWS (S3, EC2, Boto3, Amazon EMR, RDS, VPC, SG, EKS, IAM, CloudFormation, Sage Maker, Lambda), Azure, Google Cloud Platform |

**PROFESSIONAL EXPERIENCE**

Role: Sr. AWS Python Developer ***November 2022 – Present***

Client: Uline, Pleasant Prairie - WI

***Roles and Responsibilities:***

* Implemented **Django** views and templates to create **dynamic web interfaces**, enhancing user experience, developed **Python** batch processors to automate data handling tasks.
* Expanded functionality using **Flask** framework, improving the modularity and maintainability of web applications.
* Generated business unit-specific **datasets** using **Python** scripts from **database** **tables**, created **DB** **views** and **stored** **procedures** to retrieve **datasets** based on timestamps.
* Developed full-stack web applications using **Python** **(Django/Flask), Ruby (Rails)** for backend logic and **React.js**, **TypeScript** for building responsive, dynamic user interfaces and cross-platform functionality.
* Utilized **GitHub** for code versioning, ensuring smooth collaboration and **reliable deployment** to staging and production environments, implemented **PyTest, Selenium** frameworks, ensuring code quality and reliability.
* Created reusable components in **React.js**, **TypeScript** for component design using **Redux** for global state management.
* Developed serverless applications using **AWS Lambda**, writing Python functions to handle event-driven processes such as API requests, file uploads, and stream processing.
* Integrated APIs like **payment gateways, logins** and Python **Pandas** for large-scale **data** **analysis**.
* Developed interactive dashboards and web applications using **Streamlit** and **R Shiny** to visualize complex datasets.
* Integrated Python-based backends with **R Shiny** frontends, for communication between data and visualization layers.
* Developed REST APIs with Python Django to serve data dynamically to **Streamlit** and **R Shiny** applications.
* Implemented data pipelines to transform data in Python for advanced analytics in R
* Leveraged R and Python together for statistical modeling and ML, presenting results through **Streamlit** interfaces.
* Automated workflows by writing Python scripts to trigger **AWS** **Lambda functions** based on events in S3, **DynamoDB**, AWS **RDS** or other AWS services, improving operational efficiency.
* Optimized data pipelines to **ETL** data into **Snowflake**, ensuring efficient data flow and processing for analytics.
* Managed **Snowflake** environments by developing data warehousing solutions, including schema design, query optimization, and performance tuning.
* Automated data preprocessing workflows, feeding processed data into **R Shiny** apps for dynamic reporting.
* Developed custom **R Shiny** modules to integrate with Python-based APIs and external data sources.
* Implemented security protocols, including OAuth, to safeguard **R Shiny** applications connected to Python web services.
* Developed Python scripts to handle ETL operations, supporting the data pipelines for R Shiny applications.
* Utilized R Shiny’s reactive framework alongside Python-based automation scripts for real-time dashboard updates.
* Created **RESTful APIs** with Python, AWS service AWS API Gateway, enabling seamless integration with applications.
* Worked on creating GitHub action pipelines to deploy code through **Docker** containers into **AWS EC2** instances and frontend static files to **AWS S3** Buckets and **PostgreSQL** databases.
* Implemented RESTful APIs using **AWS API Gateway** and integrated Python **Lambda** functions and **Ruby** to serve as the backend in ensuring data consistency and accuracy.
* Implemented **ETL** pipelines for ETL operations into **Amazon Redshift**, ensuring efficient data processing and storage.
* Automated data ingestion workflows into **Redshift** using Python scripts and AWS services like **Lambda and Glue.**
* Scheduled **ETL jobs** using orchestration tools like **Apache Airflow**, ensuring timely data updates to **Redshift.**
* Integrated Streamlit apps with Python-based REST APIs to create interactive and scalable full-stack solutions, optimized **Streamlit** applications for data processing and caching techniques.
* Developed **multi-page Streamlit** applications using Session State for seamless navigation and data persistence.
* Enforced data security best practices by implementing RBAC and data encryption within **Snowflake** and AWS services.
* Managed batch processing workflows in **AWS Batch,** Lambda, **DynamoDB** for large-scale data processing tasks.
* Handled **Selenium** automation, **AWS** services like troubleshooting **EC2** instances, **S3** **buckets**, **VPC, Load Balancers.**
* Optimized **routing algorithms** using **Apache** **Spark** to minimize transportation costs and delivery times, used Apache **Spark Streaming** to process and analyze real-time shipment tracking data.
* Automated database maintenance tasks like backups, scaling, and monitoring for **AWS RDS** and **Aurora** using Python.
* Deployed containerized applications on AWS **EKS** for scalable microservices architecture and managed querying relational data on **RDS** and **Aurora**, ensuring efficient data retrieval and updates.
* Implemented Python-based ETL pipelines to extract data from Aurora, transform it, and load it into analytics systems.
* Managed datasets using Panda data frames and **MySQL**, queried **MySQL** database queries from **Python** using **Python** -**MySQL** connector **MySQL dB** package to retrieve information.
* Developed Python tools for orchestrating and managing **Java** **Spring Boot** microservices in container environments.
* Worked on **Core Java** to implement **multithreading** for backend processes, integrating Python for data transformation.
* Designed Python utilities to optimize **Spring Boot** application configurations and streamline performance tuning.
* Developed Python test cases for **Core Java** applications to automate functional and regression testing workflows.
* Implemented **Spring Boot’s OAuth2** authentication mechanisms for session, token validation while developing scripts.
* Worked on creating python utilities in **AWS Lambda** for parsing data, generating reports and other functionalities.
* Developed microservices using **FastAPI** to enhance **API** performance and reduce latency, handled **Selenium** test cases.
* Built asynchronous task processing with AWS Lambda, **AWS** **SQS, Dynamo DB** to handle background jobs.
* Utilized **PySpark** and **Dynamo DB** for processing large datasets, optimizing data workflows and processing times.
* Authored validation scripts in **GraphQL, DynamoDB, PostgreSQL** to ensure data integrity in loading processes.
* Actively participated in **Stand**-**up** **meetings**, weekly assessments, daily triage meetings, worked with business analysts to uphold application quality, implemented **Agile** processes and **JIRA** issue management to track **sprint** cycles.

Environment: Python, Java, PyUnit, Pandas, AWS, HTML, AJAX, CSS, JavaScript, Django, Jenkins, JSON, REST, Git, JIRA, SQL, Graph QL, PostgreSQL, Mongo DB, Agile, windows and Linux.

Role: Sr. Python Developer  ***December 2020 – October 2022***

Client: Healthesystems, Tampa - FL

***Roles and Responsibilities:***

* Responsible for gathering requirements, **system analysis**, **design**, **development**, **testing** and **deployment**.
* Developed monitoring and notification tools using **Python,** generated **Python** **Django** forms to record online data.
* Enhanced **UI/UX** design using **React.js**, **TypeScript** components, **CSS** frameworks Bootstrap, Material-UI and custom styling to ensure consistent and visually appealing user experience.
* Implemented state management solutions in **React** using **Redux**, **TypeScript,** Context API, and custom hooks, improving code maintainability and performance for large-scale applications.
* Lead the integration of frontend and backend systems, ensuring smooth communication between **React** components and Python-based APIs via **AJAX, Axios,** and **Web Sockets**.
* Managed cloud infrastructure using **Infrastructure as Code** tools like **AWS CloudFormation** or **Terraform** for predictable and version-controlled deployments.
* Built dynamic **Streamlit** dashboards integrated with Python backend systems to provide intuitive data insights.
* Automated end-to-end data processing pipelines using Python and displayed outcomes interactively via **Streamlit** apps.
* Developed Python scripts to handle **ETL** operations, supporting the data pipelines for **R** Shiny applications.
* Utilized R Shiny’s reactive framework alongside Python-based automation scripts for real-time dashboard updates.
* Deployed **R Shiny** web apps in cloud environments, integrating Python services for enhanced data handling.
* Developed monitoring solutions to track performance for **RDS** and **Aurora** databases, created Python scripts to integrate **AWS Lambda** Functions with cloud-native services such as S3, **DynamoDB**, and SNS.
* Managed Python REST APIs on AWS Lambda using **API Gateway**, connected to **Aurora** for backend processing.
* Automated schema migrations and data synchronization for Aurora and RDS databases
* Developed **Python** and **Ruby** scripts for DevOps-related tasks, including server configuration with **Ansible**, deployment automation, and monitoring system health.
* Managed containerized Python and React applications using **Kubernetes** for automated deployments and maintained Kubernetes clusters using **AWS EKS** in compliance with HIPAA regulations.
* Developed data pipelines using **Apache Spark** on **Amazon EMR** for analyzing large volumes of customers data.
* Optimized **Spark** jobs for scalability to handle medical records, and research datasets while maintaining data privacy.
* Built **ETL pipelines** using Apache Spark and **AWS Glue** to extract, transform, and load data into **AWS RDS**.
* Supported system integration by connecting **Core Java backend** systems with Python-based data analytics pipelines.
* Worked in Python libraries like **Pandas** and **PySpark** for complex data transformations before loading into **Snowflake.**
* Managed containerized Python and React applications using **Kubernetes** on **AWS EKS** for secure deployments.
* Utilized **AWS EKS** with **Dynamo DB** for serverless container management, for scaling healthcare applications.
* Configured Kubernetes resources such as deployments and Stateful Sets, ensuring encrypted data at rest and in transit.
* Managed **ConfigMaps** and **Secrets** to securely store clinical data without exposing sensitive information.
* Developed hybrid solutions combining **Spring Boot** for server-side logic and Python for data science, **AI** capabilities.
* Developed entire frontend with **React JS**, **TypeScript** and backend modules using **Python Django** Web Framework.
* Used **Python** **Pandas** to analyze large **datasets** and extract insights, automated test scripts in **Selenium** tool.
* Developed custom **Helm charts** for consistent deployment of complex healthcare applications, configured **Horizontal Pod Autoscalers (HPA)** to handle high-traffic periods, such as telehealth sessions or patient record retrieval.
* Implemented robust error handling and logging mechanisms for **ETL** workflows to ensure data quality and consistency.
* **Migrated** data pipelines from legacy systems to **Redshift**, leveraging Python-based ETL tools for seamless transitions.
* Employed Apache **Spark** to analyze medical images stored in a distributed file system like **HDFS** or **Amazon S3**.
* Created web services API layer in **Django** to supply data, built all **database** **mapping** classes using **Django** **models.**
* Optimized Python, Ruby scripts for refactoring code and using tools **Profiler** and **Benchmark** for identifying issues.
* Integrated Spark with **TensorFlow** and **PyTorch** for deep learning models to classify detect issues in health systems.
* Applied data modeling techniques in **Snowflake** to create efficient snowflake schema designs.
* Utilized **PySpark** to handle big data processing tasks, improving efficiency and scalability of **ETL** processes.
* Managed code checking using **Git** and **GitHub,** wrote scripts in **PostgreSQL, Dynamo DB** to validate data loading.

Environment: Python, PyUnit, Pandas, HTML, AJAX, CSS, Java, JavaScript, Django, Jenkins, JSON, REST, Git, JIRA, SQL, Agile, Windows, and Linux.

Role: Python Developer  ***May 2019 - December 2020***

Client: Cigna, Bloomfield - CT

***Roles and Responsibilities:***

* Collaborated with a team of developers on **Python** applications focusing on RISK management.
* Developed **Django**-**based** web applications for insurance premium calculations.
* Utilized **Python's** **OS** module in **UNIX** for job cloning, improved **website** **visibility** with **search** **engine** **optimization**.
* Implemented **client**-**side** **validation** using **JavaScript** and created **PyUnit** test cases for **unit** **testing**.
* Integrated RESTful APIs, **GraphQL** endpoints with **AWS API Gateway** to interface with frontend **React** application.
* Ensured communication between client-side **React** applications and backend using **data validation** techniques.
* Built data validation frameworks in Python to ensure data integrity during Redshift ingestion processes.
* Integrated **S3 with Redshift** for efficient data storage and retrieval, leveraging COPY commands to load large datasets.
* Automated **Redshift** cluster management tasks like resizing, backup scheduling, and monitoring with **Python** scripts.
* Enhanced **ETL** performance by leveraging parallel processing and optimizing Python scripts for batch data processing.
* Developed unit tests for Python **ETL scripts** to ensure robust and reliable data workflows in **Redshift.**
* Constructed data tables using **PyQt** to display customer and policy information, facilitating the manipulation of customer records, handled test automation with **Selenium.**
* Configured centralized logging, auditing in ELK Stack to support traceability and HIPAA-compliant logging practices.
* Utilized **Python**-**based** **GUI** components for frontend functionalities such as selection criteria.
* Improved security by implementing secure authentication methods, including **OAuth, JWT**, and **Two-Factor Authentication (2FA)**, ensuring safe user access across **Python** and **React**, **TypeScript** layers.
* Handled application-level code to interact with APIs and web services using **JSON**.
* Implemented event-driven architecture by integrating Spring Boot services with Python-based event processors.
* Employed the **Unit** **Test** **Python** **library** for testing various **Python** programs and code blocks using **Selenium.**
* Built features like chat systems, live updates, notifications using **WebSockets** in combination with Python and **React**.
* Created microservices with **FastAPI** to improve system modularity and performance, developed frontend applications using **HTML**, **CSS**, **jQuery**, **JSON**, and **JavaScript**.
* Designed DBMS system using **MySQL**, **Graph QL** and engaged in **Agile** Methodologies and **SCRUM** processes.
* Developed a fully automated continuous integration system with **Git**, **Jenkins**, and developed custom tools in **Python**.
* Used **Python** **IDE’s** such as **PyCharm**, **sublime** **text** for developing the code and performing unit test using python modules like PyTest and unit test.
* Participated in the entire **project** **lifecycle** including Design, Development, Deployment, Testing, Implementation.
* Hands-on with **Selenium** automation, containerized applications using **Docker**, ensuring consistent deployments.

Environment: Python, Django, XML, Java, Apache, CSS, MySQL, JSON, HTML, JavaScript, Shell Scripts, agile, Restful, UNIX and Windows.

Role: Python Developer ***December 2017 - April 2019***

Client: BBVA Compass Bank, Birmingham - AL

***Roles and Responsibilities:***

* Created a web application using Python scripting for data processing, utilizing **MySQL** for the database, and incorporating **HTML**, **CSS**, **jQuery**, and High Charts for data visualization on served pages.
* Employed a Test-Driven Development (**TDD**) approach to develop the application and implemented unit tests using the Python Unit Test framework.
* Developed views and templates using Python and **Django's** view controller to craft a user-friendly website interface.
* Conducted API testing using the **POSTMAN** tool, examining ETL requests on URLs for response and error handling.
* Debugged and troubleshooted web applications using **Git** as a **version control** tool to collaborate with team members.
* Worked in **MySQL**, **PostgreSQL** and **MongoDB** databases on simple queries and writing stored procedures for normalization and renormalization.
* Managed data migrations and database schemas using Django’s ORM and manual **SQL scripting** to handle large data.
* Implemented **authentication**, **authorization** mechanisms using tools like **OAuth 2.0, JWT** in web applications to manage security and user access.
* Managed applications on AWS using services **EC2, S3, Lambda**, and **RDS** and implemented serverless architecture using **AWS Lambda**, **API Gateway**, and **DynamoDB** for efficient backend solutions.
* Configured **AWS CloudFront** for content delivery and S3 for static asset storage, deployed microservices using **Docker** and orchestrated with **AWS ECS**, **EKS** for scalable backend systems.
* Worked on **React** advanced features, such as **React hooks**, **context API**, and state management libraries like **Redux**, to build robust client-side applications and services.
* Used **React’s** component-based architecture to develop reusable and modular UI components, accelerating development and improving maintainability.
* Handled **file I/O operations** for applications that required processing and manipulation of CSV, JSON, XML files.
* Configured **AWS Elastic Load Balancer** (ELB) and **Auto Scaling** Groups to ensure seamless handling of high traffic loads and application uptime.
* Implemented **CloudFront** caching strategies and leveraged AWS S3 for serving frontend data and systems.
* Executed MySQL database queries from Python using **Python-MySQL** connector and MySQL database package.
* Branching and merging code lines in the **Subversion** and resolving all the conflicts while merging codes.
* Designed and maintained databases using Python, developing a Python-based **API** with **PostgreSQL Alchemy** and **Graph QL**, used Python **scripts** to update the content in **database** and manipulate files.
* Enhanced UI by incorporating navigations, customizable column views using Python-based **GUI** components.

Environment: React, Python, Pandas, AWS, API, Docker, Kubernetes, Postman, Selenium, MySQL, PostgreSQL, SQLite, Python, Django, Git, RESTful web service, POSTMAN, SOAP, HTML, CSS, jQuery, CRUD.

Role: Python Developer ***May 2015 – November 2017***

Client: Menlo Technologies, India

***Roles and Responsibilities:***

* Developed views and templates with **Django** view controller and template language to create a user-friendly website interface and build dynamic web pages and backend services on **Python** frameworks.
* Designed and implemented **RESTful APIs**, supporting data integration and communication between systems.
* Managed code versioning with **GitHub**, Bit Bucket and deployment to staging and production servers and implement MVC architecture in developing the web application with the help of **Django** framework.
* Developed **Python scripts** for task automation, including data extraction, file handling, and process automation.
* Implemented python-based web applications interacting with **MySQL**, implemented **PyTest** for automated testing.
* Developed and optimized **Django** ORM queries, reducing the number of database queries needed by 30%, significantly improving application performance.
* Implemented server-side logic and **database** interaction, managing data with **SQL Alchemy** and native Python libraries to build efficient and responsive applications.
* Created data analysis scripts with **Pandas and NumPy**, supporting data processing needs for business operations.
* Worked on **system administration** tasks, creating Python scripts for managing server operations, integrated applications with relational databases, using **PostgreSQL, MySQL**, and **Graph QL** for data storage and retrieval.
* Configured and deployed applications on on-premises servers, using **Apache** and **Nginx** for web server management.

Environment: Django, PyTest, Jenkins, Cassandra, PySpark, Python, SSIS, SQL, Apache, Nginx, Pandas, NumPy, MySQL, PostgreSQL, Graph QL

EDUCATION

Bachelor of Technology in Computer Science from Cherabuddi Venkata Raghava College of Engineering, India.

**CERTIFICATIONS**

AWS Certified Developer Associate