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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 such as **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**.
* Demonstrated leadership in managing projects across the software development lifecycle **(SDLC)**, particularly in the development of monitoring and notification tools using **Python**.
* 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, MongoDB, and NoSQL** platforms, ensuring data integrity and performance.
* Deep knowledge of **AWS** services like EC2, S3, RDS, SQS, SNS, Auto Scaling, ELB, and Lambda of AWS.
* Demonstrated proficiency in programming languages such as **Python** and **Java,** 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, JavaScript, ReactJS**, 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 and **Perl** for system-level scripting.
* 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, 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, Ansible, Docker, Kubernetes, Terraform |
| **Methodologies** | Agile, Waterfall |
| **Cloud services** | AWS (S3, EC2, Boto3, Amazon EMR, 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 the overall user experience, developed **Python** batch processors to automate data handling tasks, saving 20+ hours of manual effort per week.
* Expanded functionality using **Flask framework**, improving the modularity and maintainability of web applications.
* Involved in complete **SDLC** process and developed monitoring and notification tools using **Python**.
* 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)** for backend logic and **React.js** for building responsive, dynamic user interfaces.
* Integrated **Perl** scripts with Python applications to enable seamless data exchange and enhance system interoperability.
* Designed custom **Perl** modules for handling complex data workflows, supporting multi-platform integration.
* Utilized **GitHub** for code versioning, ensuring smooth collaboration and **reliable deployment** to staging and production environments, implemented **PyTest** for **automated testing**, reducing bug detection time.
* Utilized **Perl** features like regular expressions and CPAN modules, to handle complex text-processing tasks.
* Created reusable components in **React.js** for component design using tools like **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.
* Maintained **Perl** scripts to automate system-level tasks, including server management, log rotation, and data processing.
* Set up and maintain CI/CD pipelines with **AWS CodePipeline, CodeBuild**, and Jenkins to streamline release process.
* Automated workflows by writing Python scripts to trigger **AWS** **Lambda functions** based on events in S3, DynamoDB, 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.
* 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.
* Implemented RESTful APIs using **AWS API Gateway** and integrated Python **Lambda** functions to serve as the backend for web and mobile applications.
* Developed **Perl** scripts for processing large volumes of log files, enabling quick identification of system issues, trends.
* Automated data extraction, transformation using Perl, improving consistency of input for downstream applications.
* Enforced data security best practices by implementing RBAC and data encryption within **Snowflake** and AWS services.
* Managed batch processing workflows in **AWS Batch,** Lambda, or **Step** Functions for large-scale data processing tasks.
* Handled for **AWS** services like maintaining and 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.
* Implemented ETL pipelines to process large datasets stored in **Hadoop HDFS**, enabling efficient downstream analytics.
* Developed Python scripts to interface with **Kafka** producers and consumers, ensuring seamless data ingestion and streaming across distributed systems.
* Automated batch processing workflows for datasets by integrating applications with Hadoop **MapReduce** and YARN.
* Built real-time data processing applications with Apache **Kafka** for stream processing and event-driven architecture.
* Utilized Python Flink, Spark Streaming to process **Kafka** topics and store results in Hadoop for analytics and reporting.
* Implemented Python scripts to monitor Kafka message brokers, ensuring minimal latency and data delivery reliability.
* Created Python utilities to automate HDFS file operations, such as file ingestion, transformation, and archiving, developed Python tools to integrate Kafka and Hadoop, enabling reliable data pipelines for batch workflows.
* Automated **Kafka** consumer group management and partition assignments, enhancing scalability and fault tolerance.
* Worked on creating python utilities in **AWS Lambda** for parsing data, generating reports and other functionalities.
* Developed and maintained microservices using **FastAPI** to enhance **API** performance and reduce latency.
* Built asynchronous task processing with AWS Lambda and **AWS** **SQS** to handle background jobs.
* Wrote **Perl scripts** to analyze large datasets, including text parsing, CSV/XML file manipulation, database integration.
* Worked on regular expressions in **Perl** to perform complex string manipulation, pattern matching for data validation.
* Utilized **PySpark** for processing and analyzing large datasets, optimizing data workflows and processing times.
* Authored validation scripts in **SQL, MongoDB** to ensure data integrity during 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, 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 components, **CSS** frameworks Bootstrap, Material-UI and custom styling to ensure a consistent and visually appealing user experience.
* Implemented state management solutions in **React** using **Redux**, 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.
* Developed **Perl** scripts to ETL data between databases, ensuring high performance and data integrity, used Perl’s advanced regular expressions for complex text parsing tasks, simplifying log analysis.
* Enhanced existing Perl-based tools by adding new features and debugging issues, improving overall functionality.
* Automated configuration management, deployment tasks using Perl scripting, reducing system provisioning time.
* Created scalable **Perl**-based automation frameworks to manage distributed systems across multiple environments.
* Designed cross-platform **Perl** scripts for handling system backups, file synchronization, disaster recovery procedures.
* Processed large volumes of unstructured data using **Perl**, enabling downstream analytics, machine learning workflows.
* Resolved critical issues in production **Perl** scripts, minimizing downtime and improving system reliability.
* Optimized large data processing jobs in Hadoop by fine-tuning MapReduce algorithms, configuring cluster resources.
* Improved **Kafka** consumer performance by implementing multi-threading, reducing message processing time.
* Enhanced **HDFS** file management efficiency by automating complex operations using Python APIs like Pydoop.
* Developed Python scripts to track Hadoop cluster performance, identify bottlenecks, ensure optimal resource utilization.
* Built diagnostic tools using Python to detect and resolve issues in **Kafka** brokers, consumers and minimizing downtime.
* Configured Python logging and alerting systems for **Kafka,** ensuring timely identification of anomalies, data loss.
* Collaborated with data engineering teams to design Python interfaces for interacting with Hadoop Hive and HBase, supporting query execution and data retrieval.
* Worked closely with DevOps to integrate Kafka, Hadoop workflows into CI/CD pipelines, automating deployments.
* Developed custom **Perl** web services to communicate between distributed systems in microservice architecture.
* Developed data pipelines using **Apache Spark** on **Amazon EMR** for analyzing large volumes of customers data.
* Managed containerized Python and React applications using **Kubernetes** for automated deployments and maintained Kubernetes clusters using **AWS EKS** in compliance with HIPAA regulations.
* Optimized **Spark** jobs for scalability to handle medical records, and research datasets while maintaining data privacy.
* Created testing scripts using **PyUnit**, the **Python** unit test framework, for all Python applications.
* Built **ETL pipelines** using Apache Spark and **AWS Glue** to extract, transform, and load data into Amazon RDS.
* Developed **business** **logic** using **Python and Java** to implement planning and tracking functions.
* 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** for serverless container management, enhancing the scalability of 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 entire **frontend** with **React JS** and **backend** **modules** using **Python** on the **Django** **Web** **Framework.**
* Used **Python** **Pandas** to analyze large **datasets** and extract insights.
* 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.
* Integrated **Prometheus** and **Grafana** to monitor health and performance of **Kubernetes** workloads, ensuring compliance with healthcare SLAs.
* Employed Apache **Spark** in conjunction with other big data tools to process and 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.**
* Designed and built **RESTful APIs** using **FastAPI** to streamline data access and integration.
* Integrated Spark with **TensorFlow** and **PyTorch** for deep learning models to classify detect issues in health systems.
* Integrated **Spark MLlib** to build predictive models for identifying risks and improve customer outcomes.
* Applied data modeling techniques in **Snowflake** to create efficient snowflake schema designs.
* Employed **PySpark** to handle big data processing tasks, improving efficiency and scalability of **ETL** processes.
* Developed **AJAX**-**driven** applications by invoking web services/API and **parsing** the **JSON** response.
* Built **Perl** scripts for interacting with MySQL, PostgreSQL using DBI and ORM frameworks to manipulate data.
* Optimized **Perl** database queries for scalability, improving data retrieval speed and reducing query load.

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** environments for job cloning, and improved **website** **visibility** through **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 seamless communication between client-side **React** application and backend services using secure protocols and **data validation** techniques.
* Implemented secure data pipelines by configuring SSL encryption for both **Hadoop** and **Kafka** clusters.
* Wrote Python scripts to validate data integrity during Kafka-to-HDFS transfers, ensuring zero loss or corruption.
* Reduced batch processing time by optimizing Python scripts for handling large datasets in Hadoop and Kafka pipelines.
* Increased system reliability by developing Python-based failover mechanisms for **Kafka** consumers, HDFS operations.
* Successfully processed over 1 billion Kafka messages daily, storing results in Hadoop clusters for long-term analysis.
* Integrated legacy **Perl** workflows with Python applications using APIs, ensuring communication between systems.
* Worked closely with DevOps teams to incorporate Perl automation scripts into tools like Terraform and Ansible.
* Reduced execution time of critical Perl scripts by implementing threading and optimizing algorithms.
* Improved code maintainability by modularizing complex Perl programs into reusable libraries and functions.
* Migrated outdated Perl applications to modern Python solutions, ensuring compatibility with current technologies.
* Conducted code reviews and quality checks for Perl codebases, ensuring best practices and minimizing issues.
* Constructed data tables using **PyQt** to display customer policy information and handle customer records.
* Configured centralized logging using **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** layers.
* Handled application-level code to interact with APIs and web services using **JSON**.
* Employed the **Unit** **Test** **Python** **library** for testing various **Python** programs and code blocks.
* Managed datasets using Panda data frames and **MySQL**, queried **MySQL** database queries from **Python** using **Python** -**MySQL** connector **MySQL dB** package to retrieve information.
* Built real-time features such as chat systems, live data updates, and 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**.
* Tested **RESTful** **APIs** including **Twilio**, **Facebook**, and **Twitter** **integrations**.
* Designed DBMS system using **MySQL**, **Mongo DB** 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.
* Containerized applications using **Docker**, ensuring consistent and efficient deployment.

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 various request methods (**GET, POST, PUT, DELETE**) on each URL 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** (**RESTful Web Service**) with **SQL Alchemy** and **PostgreSQL**, 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: 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 **SQLite, MySQL**, and **PostgreSQL** for data storage and retrieval.
* Configured and deployed applications on on-premises servers, using **Apache** or **Nginx** for web server management.

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

EDUCATION

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

**CERTIFICATIONS**

AWS Certified Developer Associate