**Harsimran Singh**

**Lead Python Developer**

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# Executive summary

With over 11+ years of hands-on experience as a Python Developer, I bring a robust skill set in full-stack development, data management, and system optimization. My career journey has been marked by spearheading the creation of high-performance web applications using cutting-edge technologies such as React, Django, and AWS services. I have successfully lead the development of lightweight and efficient applications, optimized databases for scalability and performance, and integrated seamless data pipelines for comprehensive data management.

Throughout my professional tenure, I have demonstrated proficiency in designing RESTful APIs, automating workflows with Python scripts, and implementing CI/CD pipelines for efficient software delivery. Experienced Python developer with extensive expertise in designing and deploying machine learning models to solve real-world problems. My technical skill set extends to using Golang for high-performance applications, implementing CI/CD pipelines with Jenkins and Docker, and leveraging DevOps tools like Kubernetes and OpenShift. My expertise extends to cloud platforms like AWS and Azure, where I have leveraged services such as EC2, DynamoDB, and Redshift to build scalable and reliable infrastructures. Additionally, my collaborative approach has enabled me to work effectively with cross-functional teams, ensuring the delivery of high-quality solutions aligned with business goals and user requirements.

My experience encompasses a strong focus on continuous improvement and innovation. I have actively engaged in performance tuning, automated testing, and adoption of DevOps practices to enhance productivity and software quality. By staying abreast of emerging technologies and best practices, I have contributed to the development of efficient and user-friendly interfaces, robust backend systems, and scalable microservices architectures. My track record of successful project deliveries, coupled with my commitment to staying updated with industry trends, positions me as a valuable asset capable of driving impactful solutions and achieving business success.

# Tools and Technology

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| --- | --- |
| **Programming Languages** | C, C++, Python-3.7& 2.7, .NET6.0, SQL, Golang Ruby and Shell Scripting, GTK, Java  |
| **Python Libraries** | Python, Django, Flask, Beautiful Soup, httplib2, Jinja2, HTML/CSS, Bootstrap, jQuery, NumPy, Matplotlib, Pickle, Pyside, SciPy, wxPython, PyTables, pdb |
| **Frameworks** | Django, Spark, web2py, pyramid, Flask, MongoDB, Hadoop/ Big Data and CSS Bootstrap,RASA |
| **Technologies** | HTML, CSS, DOM, SAX, Java Script, C#, AG Alfabet, JQuery, AJAX, XML, AngularJS,Version Control GIT (GitHub), SVN |
| **Version Control** | GIT (GitHub), SVN |
| **Application Tools** | Net Beans, Eclipse (SE, EE, Android), Visual Studio, MySQL |
| **Deployment Tools** | Heroku, Jenkins |
| **Databases** | Access, SQL Server, MySQL, Teradata, Oracle |
| **Software packages** | MS Word, Advanced MS Excel, MS PowerPoint, SQL Plus |
| **Reporting Tools** | SSRS, Tableau, MS-Word, and MS-PowerPoint. |
| **Operating systems** | Linux/Unix, Windows Variants, IOS, Android. |
| **Cloud Environment** | AWS Services, EC2, ELB, VPC, RDS, AMI, IAM, react, S3, Cloud Operating Systems, Azure, GCP. |

# Work experience

**Lead Python Developer / Application Architect SEP 2021 – PRESENT**

**ANTHEM - LOS ANGELES, CA**

* Spearheaded the development of a lightweight and render-efficient web application using React and GitHub API for seamless project searches.
* Lead the design, development, and deployment of scalable data pipelines, ensuring timely and successful project delivery.
* Engineered scalable platforms, leveraging AWS services such as EC2, REDSHIFT, and DynamoDB to optimize performance and enhance functionality.
* Architected Kafka-based solutions for cross-functional teams, ensuring scalability, reliability, and streamlined data processing.
* Configured Grafana to set up alerting rules and notifications, ensuring prompt awareness of critical system events and performance deviations.
* Collaborated with data scientists, engineers, and domain experts to gather requirements, define objectives, and deliver impactful machine learning solutions.
* Implemented full CI/CD pipeline by integrating SCM (Git) with automated testing tool Gradle & Deployed using Jenkins and Dockized containers in production and engaged in few Devops tools like Ansible, Chef, AWS CloudFormation, AWS Code pipeline, Terraform and Kubernetes
* Conducted rigorous performance tuning of Kafka-based solutions to achieve substantial improvements in throughput and latency, enhancing overall system efficiency.
* Lead the architecture and implementation of scalable data solutions, optimizing data storage, processing, and retrieval using modern technologies and best practices.
* Proficiency in JavaScript ES6, React, Node.js, Playwright, AWS CodePipeline, and Lambda, showcasing a diverse skill set in modern technologies.
* Experience in developing multi-language solutions, combining Python’s versatility with Ruby’s expressive syntax.
* Skilled in using Python’s subprocess and os modules to call Ruby scripts, facilitating seamless cross-language data exchange.
* Designed and developed robust microservices using Golang, improving system modularity and performance
* Monitored and logged AWS resources using CloudWatch, setting up custom metrics and alarms for proactive management.
* Utilized Java's multithreading and concurrency features to improve application efficiency and handle high volumes of transactions.
* Expertise in building RESTful APIs and proficient in handling database interactions using Node.js, contributing to robust backend development.
* Implemented DataHub for metadata management and data discovery, ensuring centralized data governance and visibility across the organization.
* Utilizing AWS services, Terraform, and infrastructure as code (IAC) for resource provisioning and optimization.
* Leveraged Google Cloud Storage (GCS) for scalable and durable storage solutions, optimizing data accessibility and reliability.
* Designed and implemented machine learning models using Python libraries such as TensorFlow, scikit-learn, and PyTorch to solve complex business problems.
* Developed and deployed predictive models for various use cases, including customer segmentation, churn prediction, and sales forecasting, resulting in improved decision-making.
* Conducted data preprocessing and feature engineering to prepare datasets for machine learning algorithms, ensuring high model accuracy and performance.
* Created and maintained RESTful APIs with Golang, enabling seamless communication between different components of the application
* Utilized Golang’s concurrency model to build highly efficient and performant applications, handling multiple tasks simultaneously
* Lead the design and management of cloud-based data solutions on platforms such as AWS, Azure, and GCP, leveraging services like S3, Redshift, BigQuery, and Databricks.
* Collaborated with cross-functional teams to integrate machine learning models into existing applications, providing actionable insights and automation capabilities.
* Developed and optimized large-scale data processing applications using Apache Spark.
* Experience in working with terraform scripts to build infrastructure in AWS.
* Utilized PySpark (Python for Spark) for data analysis, transformation, and manipulation.
* Integrated various databases such as PostgreSQL, MySQL, and MongoDB with Golang applications, ensuring smooth data storage and retrieval
* Implemented Spark jobs to process data from various sources, including HDFS, S3, and NoSQL databases.
* Developed and managed AWS resources using Boto3, automating tasks such as EC2 instance management, S3 bucket operations, and DynamoDB interactions.
* Designed and implemented ETL processes using SSIS to extract, transform, and load data from various sources into SQL Server databases.
* Built and optimized SQL queries within Java applications to enhance data retrieval speed and overall application performance.
* Developed and optimized Snowflake stored procedures using JavaScript, enabling complex data transformations and processing within Snowflake.
* Integrated KMS with Python applications to manage encryption keys securely, protecting sensitive data.
* Integrated Google Cloud services such as BigQuery and Dataflow with existing data pipelines, enabling real-time data processing and analysis.
* Conducted hyperparameter tuning and model optimization to enhance the performance of machine learning models, achieving up to a 20% increase in accuracy.
* Implemented Python-based solutions with robust security controls to meet SOC 2 compliance requirements, ensuring data protection and privacy.
* Developed custom connectors in Python to interact with DataHub APIs, facilitating seamless integration and data synchronization.
* Utilized Google Cloud Pub/Sub for event-driven architecture, enabling efficient communication and data exchange between microservices.
* Applied unsupervised Machine learning techniques, such as clustering and anomaly detection, to identify patterns and outliers in large datasets.
* Proficient in implementing Site Reliability Engineering (SRE) practices to ensure the reliability, availability, and performance of Python-based systems
* Implemented comprehensive error handling and logging mechanisms in Golang applications to ensure reliability and ease of debugging
* Lead the management and optimization of various databases including Oracle, PostgreSQL, and NoSQL databases, ensuring high availability and performance.
* Integrated third-party APIs and libraries into Java applications to extend capabilities and reduce development time
* Configured RabbitMQ as a message broker for Airflow, ensuring reliable task queuing and processing.
* Developed custom Airflow operators to interact with RabbitMQ, enhancing workflow capabilities.
* Implemented data lake architectures on Google Cloud Platform (GCP), leveraging GCS for storing raw and processed data, ensuring data availability and accessibility for analytics and reporting.
* Designed and implemented end-to-end data pipelines using Kafka Connect, seamlessly integrating diverse data sources for comprehensive data management.
* Employed Spark SQL for querying structured data and integrating with other data sources.
* Conducted data cleansing, aggregation, and complex data transformations using Spark's RDDs and DataFrames.
* Utilized PostgreSQL as a backend database for Airflow metadata, ensuring robust and scalable data storage.
* Developed reusable templates using Jinja2 to streamline the front-end development process, ensuring consistency and efficiency across multiple web pages.
* Executing the process using docker image registered in Elastic Container Registry (ECR) which is deployed using Terraform scripts
* Created and deployed AWS Lambda functions to automate serverless workflows, reducing infrastructure management overhead.
* Wrote unit tests and used testing frameworks like Testify to ensure code quality and reliability of Golang applications
* Deployed Golang applications to cloud platforms like AWS and Google Cloud, ensuring scalability and high availability.
* Implemented and managed GCP services such as Compute Engine, App Engine, and Kubernetes Engine to deploy and scale applications in a cloud environment.
* Utilized GCP's storage services, including Cloud Storage and Cloud SQL, to store and manage data effectively, ensuring high availability and durability.
* Implemented IAM solutions in Python to manage user authentication and authorization, ensuring secure access to applications and data.
* Conducted UI testing in Guidewire's Policy Center Screens for Advanced lines of business.
* Configured and monitored networking resources on GCP using VPC, Cloud Load Balancing, and Cloud DNS to ensure secure and efficient communication between components.
* Leveraged AWS Lambda functions for triggering various AWS resources, ensuring efficient resource utilization and management.
* Implemented BDD frameworks using Behave to write clear and understandable test cases in Gherkin language, bridging the gap between technical and non-technical stakeholders.
* Test Automation: Automated functional and acceptance tests with Behave, ensuring comprehensive test coverage and faster feedback cycles.
* Deployed machine learning models on edge devices using frameworks like TensorFlow Lite and Core ML, enabling real-time predictions in resource-constrained environments.
* Employed Grafana to generate clear, informative graphs and charts that effectively communicated complex data sets to stakeholders.
* Enhanced performance and scalability of data processing pipelines through Spark's in-memory computing capabilities.
* Managed AWS resources effectively using CloudWatch and monitored application resources using Nagios, ensuring high availability and performance.
* Extensive utilization of AWS services like DynamoDB, Kinesis Firehose, and Redshift for scalable and reliable data storage and processing.
* Experience in integrating RESTful APIs developed with Python frameworks (like Django or Flask) into React applications
* Implemented complex business logic and design patterns using Python classes, ensuring maintainable and scalable code architecture.
* Designed and optimized complex SQL queries for data extraction, transformation, and loading in Snowflake.
* Developed Docker container-based microservices and orchestrated deployment on a Kubernetes cluster, optimizing scalability and resource management.
* Integrated ArcGIS mapping functionalities into web applications, providing users with interactive and spatially-aware data visualization tools.
* Utilized Grafana to monitor and display real-time metrics and KPIs, providing valuable insights for decision-making and analysis.
* Used Docker to containerize Golang applications, streamlining deployment processes and ensuring consistency across environments.
* Managed and secured data storage in S3 buckets, implementing lifecycle policies and access controls.
* Developed and implemented machine learning models using Python libraries such as TensorFlow, Scikit-learn, and PyTorch to solve real-world problems and make data-driven decisions.
* Utilized Python's data analysis libraries to perform in-depth analysis of PeopleSoft data for business insights.
* Developed custom geoprocessing tools using ArcPy within ArcGIS Desktop, automating spatial analysis and data manipulation tasks.
* Ensured GDPR compliance by implementing data protection measures and processes, safeguarding personal data handled by Python applications.
* Created test scripts using CucumberJS for JavaScript projects to ensure comprehensive test coverage
* Experienced in designing and implementing resilient Python applications and infrastructure to meet SRE best practices

Environment: Python, Flask, HTML, CSS, MVC, Django, UNIX, Azure, AWS (EC2, EMR, Glue), C#, AG Alfabet, .NET, GCP, My SQL, IOS, Android, PostgreSQL, Oracle REST API, JavaScript, JQuery, Git, UI/UX, Apache, Linux, PyCharm, Anaconda, Eclipse, IntelliJ.

**Python Full Stack Developer OCT 2019 – AUG 2021**

PNC BANK – CHICAGO, ILLINOIS,

* Conducted systems analysis, designed applications, and developed database plugins for Cassandra, MySQL, and Oracle databases, ensuring robust data management and optimization.
* Automated workflows using Python scripts and UNIX shell scripting, streamlining processes and improving efficiency.
* Developed interactive React JS pages, integrated web services calls, and facilitated AJAX calls for seamless application functionality.
* Actively participated in peer code reviews and applied SAS performance tuning techniques, ensuring high-quality code and optimal system performance.
* Implemented Kafka-based pub/sub messaging patterns to facilitate efficient microservices communication and integration.
* Developed new RESTful API services that work as a middleware between our application and third-party APIs that we will used using Golang.
* Managed complex data pipelines using Pandas, Apache Airflow, and AWS Glue, ensuring smooth data flow and processing.
* Utilized Ansible for infrastructure configuration and maintenance, ensuring seamless deployment and management of resources.
* Integrated TypeScript with popular front-end frameworks like Angular or React, ensuring compatibility and optimal performance.
* Integrated machine learning models with RESTful APIs using Flask and FastAPI to provide scalable and accessible machine learning services.
* Introduced to Golang while working within a project.
* Utilized Bootstrap and Angular JS to organize and manage HTML page layouts effectively.
* Developed Docker container-based microservices and orchestrated deployment on Kubernetes cluster, optimizing scalability and resource utilization.
* Collaborated with cross-functional teams to gather requirements, design solutions, and deliver high-quality Java applications on time.
* Implemented Jinja2 templating engine to dynamically generate HTML content based on data from backend systems, enhancing the flexibility and maintainability of web applications.
* Successfully migrated legacy applications to AWS Cloud and managed datasets efficiently using Pandas and MySQL, ensuring data integrity and accessibility.
* Utilized Grafana to share dashboards and collaborate with team members, facilitating effective communication and decision-making processes.
* Configured and managed DataHub on Google Cloud Platform, ensuring efficient metadata management and data lineage tracking.
* Utilized Google Cloud Storage (GCS) for storing and accessing structured and unstructured data, enabling scalable and cost-effective data storage solutions.
* Integrated Google Cloud services like BigQuery for data analytics and reporting, enabling business insights and decision-making.
* Participated in code reviews and peer programming sessions to ensure high-quality, maintainable machine learning code.
* Implemented data governance policies using DataHub on GCP, ensuring data quality, compliance, and security across the organization.
* Implemented data validation and business logic within Snowflake stored procedures, enhancing data integrity and consistency.
* Written Terraform modules for automating the creation of VPC's and AWS EC2 Instances, modules for creation of VPC and VPN connection from Data Center to production environment and cross account VPC peering.
* Wrote microservices using Golang.
* Optimized Golang code for better performance, reducing latency and improving overall application efficiency
* Developed custom Python scripts for automating data ingestion processes from GCS into data warehouses, improving data processing efficiency.
* Leveraged Google Cloud Dataflow for ETL (Extract, Transform, Load) processes, ensuring data integration and transformation at scale.
* Developed and executed comprehensive test plans and test cases for Guidewire applications.
* Performed data integrity testing by executing SQL statements and manually verifying contents.
* Demonstrated proficiency in testing Guidewire software applications, including PolicyCenter, ClaimCenter, and BillingCenter modules.
* Developed and maintained Java-based microservices architectures, enabling scalable and modular application development.
* Conducted data analysis using machine learning algorithms and Python scientific libraries, extracting valuable insights and driving data-driven decisions.
* Automated EC2 instance management using Boto3 and AWS CLI, optimizing resource utilization.
* Integrated Python with other languages using embedPy for advanced analytics and seamless interoperability.
* Utilized Jenkins pipelines for Docker and Kubernetes deployments, ensuring efficient and automated deployment processes.
* Worked on Migration of legacy EJB based SOAP APIs to Golang based services, REST Services.
* Automated Spark job scheduling and monitoring using tools like Apache Airflow and AWS Lambda.
* Debugged and optimized Spark applications to reduce runtime and improve resource utilization.
* Utilization of Ruby for writing scripts that complement Python programs, optimizing workflows and automation processes.
* Implemented access controls in Python using KMS to restrict key usage and enforce security policies.
* Developed and deployed Machine learning ML pipelines using Python frameworks like Apache Airflow, Luigi, or similar tools to automate model training, evaluation, and deployment workflows.
* Collaborated with domain experts and stakeholders to identify business use cases, gather requirements, and translate them into Machine learning ML tasks, aligning the solutions with organizational goals.
* Expertise in optimizing React applications for performance, including code-splitting, lazy loading, and efficient data fetching techniques.
* Developed Snowflake stored procedures to encapsulate business logic and automate repetitive tasks.
* Enhanced data processing workflows by implementing advanced stored procedures with error handling and transaction management.
* Integrated disparate data sources and systems with SSIS packages, ensuring seamless data flow and consistency
* Understanding of Python and React performance metrics, able to profile and improve frontend and backend interactions to reduce latency.
* Expertise in employing Ruby’s powerful scripting capabilities to perform tasks not directly supported by Python libraries.
* Integrated third-party services and APIs with Golang applications, extending their functionality and capabilities
* Utilized Python’s analytical capabilities to preprocess and cleanse data, preparing datasets for effective visualization in QuickSight.
* Created EC2 instances and implemented large multi node Hadoop clusters in AWS cloud from scratch using automated scripts such as terraform
* Developed single-page applications with AngularJS, backed by MongoDB and NodeJS, delivering dynamic and responsive user experiences.
* Managed databases using Flask, SQLAlchemy, and PostgreSQL in Python, ensuring robust database management and optimization.
* Leveraged GCP's machine learning and data analytics services, such as BigQuery and AI Platform, to derive valuable insights from data and develop machine learning models.
* Orchestrated workflows and automated tasks using GCP's serverless computing offerings like Cloud Functions and Cloud Scheduler, improving operational efficiency.
* Utilized ArcGIS Pro for advanced 2D and 3D mapping, visualization, and analysis, providing enhanced insights into geographic data.
* Deployed Java applications on cloud platforms like AWS and Azure, ensuring high availability and scalability.
* Integrated Lambda functions with other AWS services such as S3, DynamoDB, and SNS for seamless data processing and event-driven architectures.
* Collaborated with GIS analysts to incorporate ArcGIS spatial data into project workflows, ensuring accurate geospatial context for decision-making processes.
* Implemented asynchronous tasks with Celery and RabbitMQ, enhancing application performance and scalability.
* Developed and integrated web services using SOAP and RESTful APIs, facilitating seamless communication between different systems.
* Developed Python web services for JSON processing and interfacing with the data layer, enhancing data management and accessibility.

Environment: Windows, Python3.7, Angular JS, libraries - (NumPy, SciPy, Pandas, SNMP,PyCharm, C#, IOS, Android, PyQuery, Matplotlib), SQL Alchemy, UNIX, MVC, Linux Suse,HTML5, .NET, Scala,Ansible,OAuth 2.0,Google Suite,Slack, OIDC,Kubernetes, Kafka, Shell Scripting, Azure, JSON, Apache Web Server, SQL, UNIX.

**Python Full Stack Developer JUL 2017 – SEPTEMBER 2019**

**TARGET - CHICAGO IL**

* Gathered requirements and translated business details into technical design to ensure alignment between stakeholders and development team.
* Participated in all stages of the software development lifecycle (SDLC), including design, testing, development, and implementation, ensuring high-quality deliverables.
* Developed frontend and backend modules using Python on the Django Web Framework, following the MVC architecture.
* Created tools using Python Django and utilized MongoDB for databases, including writing parsers in Python to extract valuable data from the design database.
* Implemented responsive user interfaces and maintained website standards by utilizing HTML, CSS, JavaScript, Bootstrap, and jQuery.
* Tested major transactions like Policy Submissions, Changes, Cancels, Reinstate, Rewrites, and Renewals in Guidewire Policy Center.
* Proficient in utilizing the strengths of both Ruby and Python to approach and solve computational and data-driven challenges creatively.
* Worked extensively with Spark DataFrames to ingest and transform structured and unstructured data from flat files.
* Applied MongoDB database concepts such as locking, transactions, indexes, sharding, replication, and schema design.
* Utilized Docker containers, both pre-existing and custom-built, to streamline application deployment and development processes.
* Conducted A/B testing and model validation to compare different machine learning approaches and select the best-performing model for deployment.
* Implemented automated model retraining and updating processes to ensure machine learning models remain accurate and relevant over time.
* Implemented DataHub for metadata management and data cataloging, providing a centralized repository for data assets across the organization.
* Utilized Google Cloud Storage (GCS) for storing and managing large datasets, ensuring data availability and durability.
* Integrated Google Cloud services such as BigQuery for data analytics and visualization, enabling data-driven decision-making.
* Implemented SQL queries and stored procedures in PostgreSQL to support complex workflow requirements.
* Developed custom Python scripts to automate data ingestion processes from GCS into target databases, improving data processing efficiency and reliability.
* Leveraged Google Cloud Dataflow for streamlining ETL processes, ensuring real-time data processing and analysis.
* Implemented data governance policies using DataHub on Google Cloud Platform, ensuring data quality, lineage, and compliance with regulatory standards.
* Designed and developed RESTful APIs using Python (Flask/Django), enabling seamless communication between services.
* Utilized AngularJS to develop Single Page Applications (SPAs), binding data to specific views and synchronizing data with servers using Bootstrap and AngularJS.
* Implemented API authentication and authorization mechanisms, ensuring secure access to resources.
* Configured Docker on Linux and set up Jenkins to operate within the Docker host environment.
* Developed APIs for Django applications using Django-tastypie to enable seamless integration with other systems.
* Utilized JIRA to establish an efficient development environment and manage project tasks.
* Created Python wrappers for multi-threaded applications, improving performance and efficiency.
* Developed RESTful web services for catalog and pricing functionalities using Django MVT, MySQL, and MongoDB.
* Resolved bugs, provided production support, and enhanced applications by implementing code reuse strategies and optimizing performance through the application of design patterns.
* Proficient in handling asynchronous data fetching, state updates, and UX responses in React using Axios or Fetch API.
* Managed the development and maintenance of React and Angular-based web applications, leveraging modern front-end technologies to craft intuitive and engaging user interfaces.
* Deployed and monitored scalable infrastructure on Amazon Web Services (AWS) to ensure reliable and efficient application operation.
* Skilled in using Ruby for tasks where it outperforms Python, particularly in string manipulations and metaprogramming, to optimize the performance of larger systems.
* Experience in profiling and optimizing code in both languages to ensure efficient execution and resource management.
* Implemented monitoring practices and leveraged Elasticsearch, along with AWS Lambda, for serverless code execution.
* Engaged in front-end web development using HTML/CSS, jQuery, Bootstrap, and back-end development using Golang and SQL.
* Leveraged ArcGIS Server to publish and share GIS services, enabling real-time data access and analysis for web and mobile applications.
* Developed custom ArcGIS tools using Python scripting for specialized spatial analysis requirements, enhancing project-specific functionalities.
* Created a command-line tool to interact with RESTful APIs using Golang, improving workflow efficiency.
* Demonstrated familiarity with UNIX/Linux internals, basic cryptography, and security practices.
* Generated graphical reports using Python packages NumPy and Matplotlib for data visualization.
* Implemented task objects to interface with data feed frameworks and facilitate database message service setup and updates.
* Practiced efficient code delivery through Test-Driven Development (TDD) principles and continuous integration, adhering to Agile software methodology.
* Collaborated with cross-functional teams, including business analysts and UX designers, to ensure seamless integration of user requirements and optimal user experience.
* Implemented caching mechanisms using technologies such as Redis or Memcached to improve application performance and reduce database load.
* Integrated third-party APIs, such as payment gateways or social media platforms, into the applications to enhance functionality and user experience.
* Conducted code reviews and provided constructive feedback to team members, promoting code quality, maintainability, and adherence to coding standards.
* Utilized continuous integration and continuous deployment (CI/CD) tools like Jenkins to automate build, test, and deployment processes.
* Implemented unit tests, integration tests, and end-to-end tests to ensure code quality, reliability, and maintainability.
* Collaborated with DevOps teams to automate infrastructure provisioning and configuration using tools like Terraform or Ansible.
* Configured and monitored application performance using tools such as New Relic for identifying bottlenecks and optimizing application response time.

**Environment:** Python, Django, CherryPy, Golang, HTML5, CSS, Bootstrap, JSON, JavaScript, AJAX, RESTful webservice, MongoDB, MySQL, jQuery SQLite, Jenkins, Redis, Elasticsearch, New Relic Docker, Windows 12 Server, AWS (EC2, S3), PyUnit, Terraform, Jenkins, Selenium Automation Testing.

**Python Developer MAR 2015 - JULY 2017**

BEST BUY – Langhorne, PA

* Designed, built, and tested a Dynamic Locking Mechanism (DLM) for a six-node CentOS Linux cluster in Python and Twisted Framework using an SQLite database to manage configurations.
* Managed datasets using Panda data frames and MySQL, queried MYSQL database queries from Python using Python-MySQL connector MySQL dB package to retrieve information
* Used React-Autocomplete for creating google map’s location search on the webpage.
* Designing and Development of the application with Java Server pages (JSPs) using JavaScript Framework, jQuery, AJAX, HTML5, TypeScript, CSS, and Bootstrap.
* Developed test script using mocha test step.
* Used Jasmine and Karma to test component functionality and used Postman to test API.
* Build prototype for various required services such as Scheduling, Logging and Notification Service using third party Node JS based JavaScript library.
* Integrating microservices on the UI.
* Used SourceTree for GIT UI version management and Bitbucket for the repository.
* Installed Witbe, Python, Jira, test Rail as part of server setups.
* Developed the presentation layer using HTML, CSS, JavaScript, JQuery and AJAX.
* Used jQuery libraries for all client-side JavaScript manipulations.
* Wrote Ansible Playbooks with Python, SSH as the Wrapper to Manage Configurations of AWS Nodes and Test Playbooks on AWS occasions utilizing Python. Run Ansible Scripts to arrangement Dev workers.
* Utilized Python libraries python, NumPy, Twisted and matplotlib.
* Worked on Element Tree XML API in python to parse XML documents and load the data in database.
* Skilled in collections and used for manipulating and looping through different user defined objects.
* Developed views and templates with Python and Django's view controller and templating language to created user-friendly website interface.
* Developed a fully automated continuous integration system using Git, Gerrit, Jenkins, MySQL and custom tools developed in Python and Bash.
* Designed, created, executed, and kept up answers for utilizing Docker, Jenkins, Git, and Puppet for microservices and ceaseless arrangement.
* Used Django configuration to manage URLs and application parameters.
* Created entire application using Python, Django, MySQL and Linux.
* Accessed database objects using Django Database APIs.
* Created database using MySQL, wrote several queries to extract/store data.
* Exported/Imported data between various data sources.
* Implemented the ETL mapping documents for data migration with all required data translations.
* Design and develop ETL APIs which will automate the data mining in different database sources.
* Integrated data from multiple applications using ETL and ELT tools like SSIS.
* Identified several hidden bugs caused by complicated multithreading issues such as race conditions caused by asynchronous events and resolved them.
* Container management using Docker by writing Docker files and set up the automated build on Docker HUB and installed and configured Kubernetes.
* Responsible for debugging and troubleshooting the web application.
* Took part in the entire project's lifecycle which includes Design, Development and Deploying, Testing, Implementation, and support.
* SQL Naming Conventions Enforcement, Using Python; Stored Procedures created a server job that enforces naming conventions for all SQL objects. Creating a more constant SQL environment.
* Performed efficient delivery of code based on principles of Test-Driven Development (TDD) and continuous integration to keep in line with Agile Software Methodology principles.
* Created and configured virtual development environments with Chef and Virtual Box.
* Implemented CI/CD best practices to automate build and deployment to all environments with Chef, Jenkins and Artifactory.
* Involved in configuring CI/CD with Docker and Kubernetes.
* Build prototype for various required services such as Scheduling, Logging and Notification Service using third party Node JS based JavaScript library.
* Orchestrate the creation of individual PDFs and merging all documents for an input set into a single output PDF using Snap Logic pipelines.
* Used JavaScript and GWT to update a portion of a web page thus reducing bandwidth usage and load time in web pages to get user input and requests and developed dynamic frontends using ReactJS.
* All the code are stored in local Git repository and once it is validated then it is committed onto GitHub.
* Performed Unit testing on ReactJS applications using tools like Karma, Jasmine and worked with Gulp tool for build automation.

Environment: Python 3.7, AWS,DevOps, Linux Suse,Google Suite/Smartsheets , Azure, GCP, IOS, Android, Slack ,OAuth 2.0, OIDC,Ansible, Kubernetes,Django, Django Rest, Flask, React, Redux, Circle CI, Vagrant, Splunk, New Relic Server, GitHub, Ansible, UNIX, Puppet, HTML5/CSS,SNMP, PostgreSQL, Amazon Web Service (AWS), S3, EC2, EBS, PyCharm, Microsoft Visual Code, Linux, Shell, Scripting, JIRA.

**Python Developer** Mar 2012 – Nov 2014

Saffron Tech Pvt. Ltd- India

* Led the Software Development Life Cycle (SDLC) process, encompassing requirements gathering, system analysis, design, development, testing, and deployment.
* Designed and developed front-end applications, creating user interactive (UI) web pages using HTML, XHTML, CSS, JavaScript, and jQuery.
* Collaborated with a team of developers on Python applications for RISK management, contributing to robust and efficient solutions.
* Played a key role in the design, development, testing, deployment, and maintenance of websites, ensuring functionality and user experience.
* Designed and implemented a data management system using MySQL, optimizing data storage and retrieval processes.
* Configured Docker on Linux and set up Jenkins to run under the Docker host, streamlining development and deployment workflows.
* Responsible for debugging and troubleshooting web applications, ensuring smooth and error-free operation.
* Utilized Subversion control tool for team-based development, ensuring version control and collaboration.
* Leveraged Django Database APIs to access database objects, facilitating efficient data handling and manipulation.
* Developed a server-based web traffic statistical analysis tool using Flask and Pandas, enabling data-driven insights.
* Wrote Python scripts to parse XML documents and load data into the database, automating data processing tasks.
* Managed client-side validation using JavaScript, ensuring data integrity and user input validation.
* Automated existing scripts for performance calculations using Numpy and sqlalchemy, optimizing system performance.
* Utilized jQuery for all client-side JavaScript manipulation, enhancing user interface functionality.
* Created a unit test/regression test framework for working/new code, ensuring software quality and stability.
* Developed a Python-based GUI application for Freight Tracking and processing, contributing to operational efficiency.
* Utilized Django framework for application development, implementing scalable and maintainable solutions.
* Created databases using MySQL and wrote queries to extract data, facilitating data analysis and reporting.
* Wrote Python scripts for extracting data from HTML files, automating data extraction processes.
* Effectively communicated with external vendors to resolve queries and ensure smooth project execution.
* Used Perforce for version control, ensuring code integrity and collaboration within the development team.

Environment: Python, Django 1.3, MySQL, Linux, HTML, XHTML, SVN, CSS, AJAX, Bugzilla, JavaScript, Apache Web Server, Django

**Education:**

Bachelors in Computer Engineering from MBS, Jammu University Sep 2010