**KAVITHA L**

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**SUMMARY**

* Versatile and highly skilled **Python Developer** with 6+ years of hands-on experience in developing and delivering robust, scalable software solutions
* Expertise in **Python** and its frameworks such as **Django**, **Flask**, and **FastAPI** for building web applications, microservices, and APIs
* Strong command over **cloud platforms** like **AWS**, **Google Cloud Platform (GCP)**, and **Azure**, utilizing services such as **Lambda**, **EC2**, **S3**, **Cloud Functions**, and **Kubernetes** for application deployment, scaling, and performance optimization
* Extensive experience with **DevOps** tools such as **Docker**, **Kubernetes**, **Terraform**, **Ansible**, and **Jenkins** for automating CI/CD pipelines and infrastructure as code (IaC)
* Proficient in **version control** systems like **Git**, and **Bitbucket**, and skilled in **Agile** methodologies, **SDLC**, leading **scrum** teams and contributing to sprints
* Possess a strong **UX/UI** sensibility with a focus on designing intuitive, user-centric interfaces that enhance overall user experience and functionality.
* Solid experience in **database management** using **PostgreSQL**, **MySQL**, **MongoDB**, **SQLite**, and **NoSQL** databases, with expertise in writing efficient **SQL** queries and performing database optimizations
* Hands-on experience with **message queuing systems** like **Kafka**, **RabbitMQ**, and **ActiveMQ** for building real-time, event-driven architectures
* Knowledgeable in **data engineering** tools like **PySpark**, **Apache Spark**, and **ETL pipelines**, working on **big data** environments for data processing and analytics
* Strong grasp of **OOP principles**, **multithreading**, **concurrency**, and **asynchronous programming** with Python’s **asyncio**
* Experience in Designing cloud-native applications using AWS services like Lambda, EC2, S3, RDS, and API Gateway to deliver scalable microservices.
* Experience in AWS CloudFormation and Terraform to manage infrastructure as code, ensuring consistent, repeatable deployments.
* Worked on Configure monitoring and alerting with CloudWatch and SNS for proactive system health checks and anomaly detection.
* Employed AWS IAM roles, policies, and security groups to enforce least privilege and secure application components.
* Led cloud migration initiatives and collaborated with DevOps to optimize cost, performance, and reliability of AWS-hosted solutions.
* Adept at using **test automation frameworks** like **PyTest**, **JUnit**, and **Selenium** for developing comprehensive unit tests, functional tests, and automated test suites to ensure application stability and reliability
* Well-versed in **API development** and integration, including **GraphQL**, **RESTful**, and **SOAP** services, and proficient with front-end technologies like **HTML**, **CSS**, **modern JS**, **React**, and **Angular** to collaborate with front-end teams for full-stack development
* **Built and maintained automated testing frameworks** using tools like **JUnit and Selenium**, significantly reducing manual testing effort and improving regression testing reliability.
* Passionate about staying up-to-date with the latest advancements in **machine learning (ML)**, **artificial intelligence (AI)**, and **natural language processing (NLP)** using libraries such as **TensorFlow**, **Keras**, **PyTorch**, and **Hugging Face**
* Participated in client meetings to present AI solution architecture, clarify use cases, and recommend model deployment strategies.
* Experience in translating business requirements into AI-based technical implementations, aligning client needs with ML capabilities.
* Strong interpersonal and communication skills, with a proven track record of mentoring junior developers, leading cross-functional teams, and delivering high-quality solutions under tight deadlines
* Always striving for continuous improvement through **code reviews**, **peer feedback**, and **process optimization**

**TECHNICAL SKILLS**

* **Languages:** Python, JavaScript, SQL, C, C++, Java, GoLang
* **Web Technologies:** Django, Flask, HTML5, CSS3, XML, JSON, Bootstrap, AngularJS, React, Node.js, jQuery
* **Database Technologies:** RDBMS, SQL, NoSQL, PostgreSQL, MySQL, MongoDB, Oracle, SQLite, Redis
* **Tools/Technologies:** Git, Docker, Kubernetes, Jenkins, CI/CD, RESTful APIs, AWS, GCP, Azure, Kafka, RabbitMQ, Splunk, Palo Alto
* **Libraries/Frameworks:** NumPy, Pandas, Scipy, Matplotlib, Scikit-learn, Spring Boot, TensorFlow, PyTorch, SQLAlchemy
* **Testing:** PyTest, Selenium, JUnit, TestNG, Unit Testing, Integration Testing
* **Cloud:** AWS (EC2, S3, Lambda, RDS), GCP, Azure
* **Version Control:** Git, GitHub, Bitbucket
* **DevOps:** Docker, Jenkins, Kubernetes, Ansible, Infrastructure as Code (IAC)
* **Agile Tools:** Jira, Confluence, Trello
* **Security & Cybersecurity:** Security, Cyber Security, SecOps
* **Operating Systems:** Unix, Linux, Windows

**Senior Fullstack Python Developer**

Comcast – Denver, CO *Oct 2024 – Present*

* Led the development of RESTful microservices using **Django** and **Flask**, improving response times by 30% for large-scale enterprise applications.
* Implemented **Infrastructure as Code** (Iac) using Terraform and Ansible to automate provisioning of cloud resources, improving deployment speed and consistency.
* Developed and maintained automated end-to-end test cases using **Cypress**, ensuring robust regression testing and reducing manual QA efforts by over 40%.
* Designed and implemented NoSQL data models using DynamoDB to support highly available and low-latency backend services.
* Designed and deployed serverless APIs using AWS Lambda and API Gateway, enabling real-time CRUD operations on DynamoDB.
* Developed backend services using Node.js and Express.js for handling high-throughput RESTful API requests.
* Integrated third-party APIs using Node.js middleware to extend system functionality across multiple services.
* Integrated AWS S3 for scalable, durable object storage in data-heavy applications, enabling efficient storage of logs, backups, and static content.
* Developed automated Python scripts for file uploads, versioning, and lifecycle management to optimize storage costs.
* Developed behavior-driven test scenarios using Behave and Python for validating API behavior and edge cases.
* Wrote Cucumber feature files to describe application workflows and collaborated with QA on test automation strategies.
* Implemented S3-triggered Lambda functions to automate data processing workflows such as image resizing and metadata extraction.
* Integrated pre-trained AI/ML models into backend services using TensorFlow and PyTorch, enabling real-time inference via RESTful APIs.
* Developed model-serving infrastructure using Flask and FastAPI to expose machine learning predictions as scalable APIs.
* Built and deployed AI-based microservices on Google Cloud Platform (GCP) using Cloud Functions, App Engine, and Vertex AI.
* Implemented OWASP Top 10 security best practices including input validation, secure authentication, and error handling across all microservices.
* Enforced HTTPS/TLS encryption for secure data transmission and compliance with internal security policies.
* Collaborated with data scientists to transition models from training to production, ensuring performance benchmarks were met in live environments.
* Worked across all phases of the **SDLC**, including requirement gathering, design, development, testing, deployment, and maintenance, ensuring timely and quality delivery of software products.
* Architected scalable solutions using **AWS Lambda** and **Docker containers** to handle millions of transactions per day.
* Built dynamic, component-based UIs using React.js with Hooks and Redux for state management in a responsive web application.
* Collaborated with UX designers to implement pixel-perfect React components, ensuring WCAG-compliant accessibility and responsiveness.
* **Integrated diverse software components** and APIs using RESTful services and messaging queues, ensuring reliable **software integration** and data consistency across modules.
* Built automated deployment pipelines using **Jenkins**, integrating unit tests and monitoring tools, reducing manual deployment times by 50%.
* Implemented distributed data processing tasks using **Celery** and **RabbitMQ**, enhancing data aggregation by 40%.
* Designed and implemented NLP pipelines for tasks such as sentiment analysis, keyword extraction, and topic modeling using Hugging Face Transformers and SpaCy.
* Automated text classification and entity recognition processes, improving data processing efficiency by 30%.
* Tuned and deployed NLP models for unstructured text analysis in customer support logs and user reviews.
* Designed and optimized SQL queries and ORM models using **SQLAlchemy**, reducing database query times by 25%.
* Collaborated with front-end teams to create seamless user interfaces with **React.js** and integrated REST APIs for dynamic content rendering.
* Automated tasks and built efficient scripts using **Python** to streamline infrastructure management, saving 200+ man-hours annually.
* Managed container orchestration using **Kubernetes**, improving resource utilization and application scalability by 35%.
* Led a cross-functional team to implement **CI/CD pipelines**, reducing deployment failures by 20% through better code quality and integration testing.
* Integrated **AWS S3** for secure, high-availability data storage, resulting in a 15% increase in data retrieval speeds.
* Improved system security by implementing **OAuth2** and **JWT** authentication protocols, protecting sensitive data and reducing unauthorized access by 10%.
* Optimized performance monitoring using **Prometheus** and **Grafana**, reducing system downtime and response time to incidents by 40%.
* Worked closely with DevOps teams to establish best practices for serverless architecture, cutting infrastructure costs by 25%.
* Mentored junior developers on best coding practices, performance optimization, and debugging techniques, contributing to an overall 20% increase in team productivity.
* Integrated real-time event streaming with **Kafka** to improve data flow and responsiveness in high-traffic environments, reducing latency by 30%.

**Fullstack Python Developer**

Visa – Austin, TX *Feb 2023 – Aug 2024*

* Developed and maintained high-quality, scalable back-end systems in **Python** using **Flask** and **Django** frameworks.
* Enhanced **ETL** pipelines and integrated **NoSQL** databases for real-time data analytics, cutting data retrieval time by 35%.
* Developed and deployed a Python-based web application that integrated data from multiple sources, resulting in a 25% increase in user engagement and a 20% increase in revenue.
* Optimized code for performance and scalability, reducing page load times by 40% and supporting a 50% increase in traffic.
* Ensured secure S3 bucket configurations with proper access controls, encryption, and audit logging via CloudTrail.
* Collaborated with DevOps teams to incorporate S3 in CI/CD pipelines, enabling seamless artifact storage and retrieval.
* Integrated AES encryption for at-rest data protection and applied IAM policies for role-based access control.
* Conducted regular static code analysis and vulnerability scanning using tools like SonarQube and Bandit to identify and remediate security issues.
* Optimized DynamoDB access patterns and indexing strategies to enhance query performance and reduce read/write costs.
* Implemented DynamoDB Streams to trigger downstream processing via Lambda for real-time data synchronization.
* Collaborated with cross-functional teams to design and develop a RESTful API that integrated with multiple third-party systems, resulting in a 30% increase in data accuracy and a 25% reduction in manual data entry.
* Created custom reusable UI components and integrated RESTful APIs to support real-time data updates and visualizations.
* Optimized frontend performance using lazy loading, code-splitting, and memoization techniques in React.
* Used Jest for unit testing React components and validating Redux state transitions and asynchronous actions.
* Integrated BDD frameworks into CI/CD pipelines to ensure automated validation before production releases.
* Utilized Node.js with AWS Lambda for building lightweight serverless functions triggered by event sources like S3 and DynamoDB.
* Optimized performance in Node.js applications by applying async patterns, memory profiling, and non-blocking I/O techniques.
* Mentored junior developers and provided technical guidance, resulting in a 30% improvement in code quality and a 15% increase in team productivity.
* Troubleshot and resolved technical issues for the application, resulting in a 25% reduction in support tickets and a 15% increase in customer satisfaction.
* Wrote and debugged code for automated tests, reducing testing time by 50% and improving overall code quality by 25%.
* Developed and maintained databases using **SQL** and **NoSQL** technologies, resulting in a 40% increase in data accuracy and a 20% reduction in data processing time.
* Collaborated with data science teams to build predictive models using **NumPy**, **Pandas**, **Scikit-learn**, and **TensorFlow**, improving accuracy by 20%.
* Refactored legacy systems into modular **microservices** using **Docker** and **Kubernetes**, resulting in a 40% increase in application scalability.
* Wrote comprehensive test suites using **PyTest** and improved application stability through **unit** and **integration tests**.
* Implemented secure authentication mechanisms using **OAuth** and **JWT** for user-based APIs, enhancing data security.

**Python Developer**  
Infosys Limited - Hyderabad, India *Nov 2020 – Dec 2022*

* Designed and deployed back-end systems using **Python**, **Django**, and **PostgreSQL** for e-commerce applications serving over 50,000 users.
* Developed and deployed a Python-based web application that increased user engagement by 25% and reduced bounce rate by 15%.
* Collaborated with a team of developers to optimize code for performance and scalability, resulting in a 30% improvement in application speed.
* Applied fine-grained IAM roles and encryption settings for secure data access and compliance with organizational policies.
* Created and maintained documentation for the application, ensuring ease of use for future developers and reducing onboarding time by 20%.
* Collaborated with stakeholders to optimize code for performance and scalability, resulting in a 30% increase in system efficiency and a 15% reduction in operational costs.
* Developed and maintained databases using **SQL** and **NoSQL** technologies, resulting in a 40% increase in data accuracy and a 20% reduction in data processing time.
* Created custom Python modules for API integration, boosting system performance by 15%.
* Utilized **AWS** services (EC2, S3, RDS) for deploying and managing cloud-hosted applications, ensuring 99.9% uptime.
* Worked with **Agile/Scrum** methodology and actively participated in sprint planning, delivering key features on time.
* Led database optimization and migration tasks, reducing page load times by 25% across multiple client platforms.

**Python Developer**

Syntel - Hyderabad, India *Oct 2018 – Oct 2020*

* Developed and maintained enterprise-level web applications using **Python** and **Java**, focusing on scalability and performance improvements.
* Wrote unit tests to ensure robust code quality and participated in peer code reviews to maintain coding standards.
* Helped automate repetitive tasks using Python scripts, improving productivity and reducing errors by 15%.
* Assisted in building **RESTful APIs** and integrated third-party services, enhancing application functionality and user experience.
* Collaborated with cross-functional teams to gather requirements, analyze business needs, and provide software solutions that improved operational efficiency.
* Participated in the **full SDLC**, including design, coding, testing, and deployment, ensuring timely and successful project delivery.
* Developed automated scripts in **Python** for infrastructure monitoring, reducing downtime and manual intervention by 20%.
* Utilized **SQL** and **NoSQL** databases to store and manage data, optimizing query performance and reducing system load times by 15%.
* Implemented **agile development practices** and contributed to sprint planning, effectively delivering key features on time.
* Participated in code reviews and debugging sessions, ensuring high-quality and maintainable code.