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**Portfolio:** <https://sahithibikkina46.github.io/>

**GitHub:** <https://github.com/sahithibikkina46>

## Summary

Senior Software Developer with 7+ years of experience designing, developing, and deploying scalable, secure, and high-performance full-stack applications across healthcare, banking, foodservice distribution, and telecom domains. Strong expertise in Python and Django, including MVC/MVT architecture, REST & SOAP APIs, and ETL/data integration workflows. Proven ability to build responsive, data-driven frontend applications using React, Redux, AngularJS, HTML5, CSS3, Bootstrap, and JavaScript. Highly proficient in database design, schema optimization, and query performance tuning across MySQL, PostgreSQL, Oracle, DB2, and MongoDB, with hands-on experience in data analytics using Pandas, NumPy, SciPy, and Matplotlib. Experienced in unit testing, Test-Driven Development (TDD), automation, and regression testing using Pytest and Selenium. Strong background in cloud-native development and DevOps practices using AWS, Azure, Docker, Kubernetes, and CI/CD pipelines, with extensive experience delivering HIPAA-compliant, secure, production-grade systems while collaborating effectively with cross-functional teams.

## Technical Skills

Category	Technologies / Tools
Programming Languages	Python, SQL, JavaScript, HTML5, CSS3, Shell Scripting
Web & Frontend Technologies	Django, Django Templates, React JS, Redux, AngularJS, HTML5, XHTML, CSS3, jQuery, AJAX, JSON, Bootstrap, JavaScript
Backend & APIs	Python, Django, MVC/MVT Architecture, RESTful APIs, SOAP Web Services, Django ORM, ETL Workflows, HL7 FHIR API, Data Pipelines (Celery, RabbitMQ, Kafka)
Databases	MySQL, PostgreSQL, Oracle, DB2, MongoDB
Data & Analytics	Pandas, NumPy, SciPy, Matplotlib, Data Transformation, Time-Series & Tabular Data Processing, Predictive Analytics
AI/ML	LLAMA, Dialog Tree, AI/ML algorithms for risk management and healthcare analytics
Testing & Quality	Pytest, Unit Testing, Test-Driven Development (TDD), Selenium, Regression Testing, Debugging & Troubleshooting
Cloud & Deployment	AWS (EC2, S3, RDS, Lambda, API Gateway, CloudWatch), Azure (App Service, SQL Database), Elastic Beanstalk
DevOps & CI/CD	Docker, Kubernetes, Jenkins, Git, GitHub, JFrog, CI/CD Pipelines
Monitoring & Security	AWS CloudWatch, Azure Monitoring Tools, Splunk, RBAC, Secure API Integration, HIPAA Compliance
Tools & Methodologies	PyCharm, VS Code, Eclipse, Postman, Linux/UNIX, Jira, Confluence, Agile/Scrum, Microservices Architecture

## Professional Experience

**Senior Software Developer**  
UTMB, Galveston, Texas

Feb 2024 – Present

**Project Description:** Leading the development and optimization of healthcare applications tailored to hospital workflows, enhancing patient care, operational efficiency, and clinical decision-making. Responsible for designing, developing, testing, and deploying scalable full-stack solutions while ensuring HIPAA compliance, data security, and cloud-based deployment. Implemented AI-driven tools to improve diagnostics, patient engagement, and predictive analytics in collaboration with cross-functional clinical and engineering teams.

### Frontend

- Developed responsive, intuitive web interfaces using **HTML, CSS, JavaScript, jQuery, AJAX, JSON, Bootstrap, and Django templates** to enable seamless patient and clinician interactions.
- Built dynamic dashboards and interactive views to visualize **patient metrics, organ transplant data**, and hospital workflow **KPIs**.
- Implemented client-side validations, error handling, and dynamic data rendering for accurate and efficient data entry.
- Integrated data-driven components with **backend APIs** to provide real-time updates and reporting functionality.

### Backend

- Designed and implemented backend business logic using **Python and Django**, ensuring high performance, scalability, and maintainability.
- Developed **RESTful APIs** and worked extensively with **HL7 FHIR** to enable secure and standardized data exchange with **Epic Clarity** and **Caboodle EHR systems**.
- Built and automated end-to-end **ETL pipelines** using **Azure Data Factory** to extract, transform, and deliver clinical datasets from on-prem **UTMB servers** to cloud infrastructure.
- Processed structured and unstructured clinical data using **Pandas, NumPy, and SciPy**, supporting data analytics and predictive modeling.
- Implemented scripts for data validation, database updates, workflow automation, and **XML/JSON** file handling.
- Ensured data integrity and security across multiple hospital departments while following **HIPAA compliance standards**.

### AI / Analytics

- Assisted in developing a **bilingual (English/Spanish) multimodal chatbot** using the **DialogTree framework** and **LLAMA model**, enhancing patient engagement and reducing query response times.
- Applied **predictive analytics** and **AI algorithms** to support **clinical decision-making** and improve **diagnostic accuracy**.
- Collected and analyzed user feedback for continuous improvement of AI-driven features, improving **search efficiency** for organ transplant services.

### Cloud / Deployment

- Deployed applications and **ETL pipelines** on **Azure Cloud**, leveraging Azure services for **security, scalability**, and high availability.
- Implemented **CI/CD practices** and **Git-based workflows** to ensure smooth deployment and version control.
- Monitored applications and data pipelines for **performance, security**, and compliance using **Azure monitoring tools**.

**Environment:** Python, Django, HTML, CSS, JavaScript, jQuery, AJAX, Bootstrap, Django Templates, Pandas, NumPy, SciPy, Azure Data Factory, HL7 FHIR API, LLAMA, DialogTree, MySQL, PostgreSQL, Git, Azure Cloud, HIPAA Compliance

**Software Developer**  
Sysco, Houston, TX

June 2022 – Aug 2023

**Project Description:** Worked as a Full Stack Software Developer on an enterprise-scale platform in the foodservice distribution and supply chain domain, supporting high-volume operational workflows, monitoring, and reporting. Contributed across the full software development lifecycle including requirements analysis, system design, development,

testing, deployment, and production support using Agile/Scrum methodology. Designed scalable backend services, secure REST APIs, and cloud-native deployments to support performance, reliability, and continuous delivery.

#### Frontend

- Developed **responsive web interfaces** using **HTML5, CSS3, JavaScript, and Bootstrap** for operational dashboards and workflow management.
- Built **data-driven UI components** to display task status, operational metrics, alerts, and performance KPIs.
- Implemented **client-side validations, error handling, and role-based UI access** for internal and administrative users.
- Integrated frontend components with backend **RESTful APIs** to enable asynchronous data loading and real-time updates.
- Optimized UI performance using pagination, efficient data rendering, and AJAX-based updates.

#### Backend

- Designed and developed **scalable backend services using Python and Django**, following **MVC/MVT architecture** and clean coding principles.
- Implemented **RESTful APIs** to support workflow execution, task lifecycle management, reporting, and administrative operations.
- Built **modular service components** using **Django REST Framework** for scalability and maintainability.
- Managed data persistence using **PostgreSQL and MongoDB**, applying indexing, caching, and query optimization.
- Implemented **asynchronous background processing** using **Celery and RabbitMQ** for scheduled jobs, notifications, and batch workflows.
- Enforced **authentication, authorization, and role-based access control (RBAC)** to meet enterprise security standards.
- Added **structured logging, exception handling, and audit trails** for traceability and operational monitoring.
- Developed **unit and integration tests** using **Pytest and unittest** to ensure system reliability.

#### Cloud / DevOps:

- Deployed applications on **AWS and Azure**, ensuring high availability, scalability, and fault tolerance.
- Utilized **AWS EC2, S3, RDS, Lambda, and API Gateway** to support cloud-native and event-driven workflows.
- Containerized applications using **Docker** and orchestrated deployments with **Kubernetes**.
- Built and maintained **CI/CD pipelines** using **Git, GitHub, Jenkins, and JFrog** for automated builds and deployments.
- Implemented monitoring and alerting using **AWS CloudWatch** and centralized logging tools.
- Collaborated with DevOps and QA teams to manage releases, production support, and incident resolution.

**Environment:** Python, Django, Django REST Framework, HTML5, CSS3, JavaScript, Bootstrap, REST APIs, PostgreSQL, MongoDB, Celery, RabbitMQ, Docker, Kubernetes, AWS (EC2, S3, RDS, Lambda, API Gateway, CloudWatch), Azure, Linux/UNIX, Git, GitHub, Jenkins, JIRA, Confluence, Agile/Scrum, CI/CD, Pytest, unittest

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#### Software Developer

Feb 2020 – May 2022

M&T Bank, Buffalo, NY

**Project Description:** At M&T bank served as a Software Developer, leading the design and development of a secure, scalable, full-stack Python-based platform supporting core banking operations including customer onboarding, transaction processing, risk assessment, compliance monitoring, and audit reporting. Actively involved in requirements gathering, system design, development, testing, deployment, and production support, following Agile/Scrum methodology. Played a key role in modernizing legacy workflows, improving system performance, enhancing data reliability, and ensuring adherence to banking security and regulatory standards.

#### Frontend

- Led the development of **responsive, user-centric web interfaces** using **HTML5, CSS3, JavaScript, jQuery, AJAX, JSON, Bootstrap**, and Django templates.
- Designed and implemented **interactive dashboards** to visualize **real-time transactions, account summaries, fraud indicators, risk metrics, and compliance KPIs**.
- Implemented **client-side validations, secure form handling, and role-based UI access** for sensitive banking operations such as approvals, payments, and account modifications.

- Optimized UI performance using **AJAX-based partial page updates**, reducing page reloads and improving user experience for high-volume banking users.
- Collaborated closely with UX, product owners, and compliance teams to ensure usability aligned with banking standards.

#### Backend

- Architected and developed **scalable backend services** using **Python and Django**, following **MVC/MVT design principles** and clean coding practices.
- Designed and implemented **RESTful APIs** to support banking functionalities including **customer data management, transaction lifecycle processing, loan servicing, and regulatory reporting**.
- Built and maintained **robust ETL pipelines** to ingest, transform, and reconcile data from **multiple banking systems and third-party sources** into centralized databases.
- Utilized **Pandas and NumPy** for **financial data validation, reconciliation, aggregation, and audit analytics**, ensuring high data accuracy.
- Implemented **secure authentication, authorization, and role-based access control (RBAC)** to meet enterprise banking security requirements.
- Applied **Test-Driven Development (TDD)** practices and developed comprehensive **unit and integration test suites** to improve code quality and reduce production defects.
- Designed optimized database schemas and performed **query tuning, indexing, and caching strategies** for high-throughput transactional systems.
- Implemented structured logging, exception handling, and audit trails to support **compliance, traceability, and operational monitoring**.

#### Cloud / DevOps

- Led deployment and support of applications in **AWS and Azure Cloud environments**, ensuring **high availability, scalability, and fault tolerance**.
- Built and maintained **CI/CD pipelines** using **Git, GitHub, Jenkins**, enabling automated builds, testing, and deployments.
- Developed **microservices and serverless components** using **AWS Lambda and API Gateway** to support event-driven banking workflows.
- Utilized **AWS EC2, S3, DynamoDB, and CloudWatch** for secure data storage, performance monitoring, and alerting.
- Implemented infrastructure configurations and deployment automation to support **production-grade banking systems**.
- Worked closely with DevOps, QA, and security teams to manage releases, resolve incidents, and support regulatory audits.
- Coordinated with offshore development teams, provided technical guidance, conducted code reviews, and ensured adherence to best practices.

**Environment:** Python, Django, REST APIs, HTML5, CSS3, JavaScript, jQuery, AJAX, Bootstrap, Pandas, NumPy, SQL, PostgreSQL, Oracle, ETL, Git, GitHub, Jenkins, AWS (EC2, S3, Lambda, API Gateway, DynamoDB, CloudWatch), Azure, Linux/UNIX, Agile/Scrum, JIRA

#### Software Developer

Dec 2018 – Jan 2020

Evolve Technologies, India

**Project Description:** Worked as a Software Developer on a full-stack Python platform for enterprise telecom operations, managing user workflows, data ingestion, monitoring, and reporting. Participated in the complete SDLC requirements analysis, design, development, testing, deployment, and maintenance using Agile/Scrum methodology. Built responsive React frontend components and scalable Python/Django backend services, integrating microservices architecture and real-time processing to ensure secure, efficient, and reliable operations.

#### Frontend

- Developed **React JS** components to create interactive and responsive UI for user management, workflow dashboards, and reporting modules.
- Used **React Hooks** (useState, useEffect, useContext) and **Redux** for state management across complex components.

- Integrated frontend with RESTful APIs using **Axios** and **Fetch** to enable asynchronous data updates and maintain real-time data synchronization.
- Implemented **responsive layouts and device-specific styles** using **CSS3, Media Queries, Bootstrap, and HTML5** to ensure usability across desktops, tablets, and mobile devices.
- Designed dashboards and data tables to visualize operational metrics, alerts, and workflow progress, enhancing user experience and operational efficiency.
- Implemented client-side validations, error handling, and **role-based UI access** for sensitive workflows and user actions.
- Built reusable **React components** and integrated third-party libraries to accelerate development and ensure maintainable code.

## Backend

- Developed scalable backend services using **Python and Django**, following **MVC/MVT principles** for modular and maintainable code.
- Designed and implemented **RESTful APIs** to support user management, workflow automation, reporting, and real-time processing.
- Implemented **ORM with Django Models** to manage database interactions and support data persistence in PostgreSQL and MySQL.
- Integrated **message queues and real-time data pipelines** using **RabbitMQ, Kafka, and Celery** for asynchronous task processing.
- Developed **unit and integration tests** using **Pytest** and **unittest** to ensure high code quality and reduce production defects.
- Implemented **authentication, authorization, and role-based access control (RBAC)** to enforce enterprise security policies.
- Applied caching strategies and query optimization to improve backend performance for high-throughput operations.
- Built microservices-based modules for modular deployment, automated testing, and scalability using Python and Django REST Framework.

## Cloud / DevOps

- Deployed applications on **AWS** using **EC2, S3, RDS, Lambda, API Gateway, and Elastic Beanstalk**, ensuring high availability and scalability.
- Configured and maintained **Docker containers** and orchestrated them using **Kubernetes** to enable microservices deployment and auto-scaling.
- Built **CI/CD pipelines** using **Git, GitHub, Jenkins, and JFrog** for automated testing, build, and deployment processes.
- Managed monitoring, logging, and alerting using **AWS CloudWatch and Splunk**, ensuring application reliability and operational visibility.
- Leveraged **Azure App Service and Azure SQL Database** for multi-cloud deployments, ensuring data security and fault tolerance.
- Ensured secure messaging between services with **AMQP**, asynchronous task handling, and service-to-service authentication.

**Environment:** Python, Django, Django REST Framework, React JS, Redux, HTML5, CSS3, Bootstrap, JavaScript, AJAX, JSON, PostgreSQL, MySQL, RabbitMQ, Kafka, Celery, Docker, Kubernetes, AWS (EC2, S3, RDS, Lambda, API Gateway, CloudWatch), Azure, Linux/UNIX, Git, GitHub, Jenkins, JIRA, Agile/Scrum, CI/CD, Selenium, Pytest, unittest, Microservices

## Education

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**Master's in Computer Science –**  
**Central Michigan University**

**Bachelor of Technology in Computer Science –**  
**Gayatri Vidya Parishad College of Engineering For Women – Visakhapatnam, India**