NIRMAL POPAT

SOFTWARE DEVELOPER

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Nirmal Popat

PROFILE

As a seasoned software developer with over 9 years of experience, I excel in innovating software designs, conducting rigorous testing, and proficiently coding and debugging applications. My expertise extends to database and API design, enabling me to craft effective software solutions and adeptly troubleshoot issues as they arise. I am eager to bring my skills and experience to AP Inc., contributing to its success through my commitment to excellence in software development.

SKILLS

- Python
- Flask, Fast API
- Product management
- Django Rest Framework
- GraphQL
- Elasticsearch, Dynamo DB, Databricks
- AWS(EC2, RDS, ECR, ECS, S3),Azure
- GitHub
- Docker
- Database designing
- Testing, Unit Testing
- Celery
- Redis, Rabbit MQ
- Postgres, SQL
- NumPy, pandas
- Postman
- Jenkins
- Problem solving
- Javascript
- HTML, CSS
- Token authentication, permisison
- Testproject test automation tool
- Jmeter
- ORM, sqlalchemy
- Apache
- Web Scraping

EXPERIENCE

LEAD TECH ARCHITECT

AlgoAcharya

Jan-2024- Current

- I lead the development of algorithmic trading products, overseeing a team of developers and participating in both technical and business discussions. My responsibilities include **database design** using **sharding** and **master-slave architecture**, **REST API** development, and ensuring **high-quality code**. We utilize **Docker** for containerization, **Jenkins** for **CI/CD pipelines**, **AWS RDS** for database management, and **RabbitMQ** for data transmission. I implemented **Nginx** with **caching** and **load balancing**, along with encryption techniques to protect sensitive data.
- I collaborate with testers and front-end developers, document our APIs, and deploy code on AWS. My role involves creating and managing **JIRA** tickets, assigning tasks, and performing **PR reviews**. Additionally, I developed automation for algo trading using **AWS Lambda** and created data visualizations for users. I tackle production bugs, participate in client meetings, and oversee junior team members' tasks. My experience in software **development**, **leadership**, and **strong communication skills** make me a valuable asset to complex trading projects.

EXPERIENCE

SENIOR SOFTWARE DEVELOPER

Hardwin

May-2022- December-2023

- I **lead a team of 8 developers** in a healthcare software project, where I'm responsible for **database design**, **REST API** development, and ensuring high-quality code. We use **PostgreSQL** as our database, **Docker** for containerization, and employ **CI/CD** pipelines for automation. Additionally, we utilize **Redis, RabbitMQ**, **Apache** and **Celery** for various aspects of our project, while also implementing multithreading for enhanced performance.
- I collaborate closely with testers and front-end developers to meet client needs, document our APIs, and deploy our code on **AWS**. We work in a **microservice architecture** using the Tooljet GUI tool. I also tackle production bugs, participate in client meetings, design APIs and databases, and oversee junior team members' tasks. My role bridges the gap between front-end developers and testing, fostering effective collaboration within our team.
- My experience in software **development** and **leadership**, along with **strong communication skills**, make me an asset to complex healthcare projects.

SOFTWARE ENGINEER

Freelancing

2-Aug-2020, 26-April-2022

- As a key contributor to an internship platform project, I had the opportunity to work on the project from its inception. I took on a wide range of responsibilities, including designing and writing models, **Swagger documentation**, and test cases, as well as implementing critical features for the platform's REST APIs.
- The platform itself is designed to allow students to register for internships and companies to post their job openings. I played a pivotal role in ensuring that these core functionalities were implemented effectively and efficiently.
- Throughout the project, I worked closely with my colleagues to ensure that our work met high-quality standards and that we delivered results that exceeded client expectations. Thanks to my extensive experience in software development, I was able to deliver excellent results while working within tight deadlines.
- Overall, I'm proud of the work that I accomplished on this project, and I'm confident that my skills and experience will be valuable to any team working on complex software solutions in the future.

SOFTWARE DEVELOPER

Web4Buddy

Jun 1, 2017, to August 1, 2020

- As a software developer, I was responsible for handling REST APIs and creating web applications according to company requirements. One of my key responsibilities was to create REST APIs, including hosting, authentication, and database design. In addition, I was also responsible for integrating third-party APIs like Twilio, Message91, and AWS into our applications.
- A key part of my role was to create APIs based on visual design mockups created in Figma. This required close collaboration with design teams to ensure that our APIs met the company's visual and functional requirements.
- Throughout my time in this role, I developed a deep understanding of how to create effective and efficient APIs that meet the needs of modern web applications. Thanks to my extensive experience in API design and integration, I was able to deliver excellent results while working within tight deadlines.
- Overall, I'm proud of the work that I accomplished in this role, and I'm confident that my skills and experience will be valuable to any team working on complex software solutions in the future.

PROJECTS

GENAI APP

Developed a robust system leveraging both open-source and closed-source models for **natural language processing** and **machine learning**. The project integrated models from **Hugging Face** (open-source) and APIs from **OpenAI** and **Gemini** (closed-source) to deliver powerful **AI-driven functionalities**. The system allows users to upload PDF, CSV, Excel, and MP3 files and obtain answers via API. Users can compare and rate answers from multiple LLMs, fostering better insights and **decision-making**. Handled **Docker** for **containerization**, **AWS** for **deployment**, **Nginx** for **load balancing** and **caching**, and **Jenkins** for **CI/CD** pipelines, managing the **DevOps** aspect to ensure seamless integration and deployment processes. Developed **REST APIs** and **business logic** in **Python**, implemented file validation, worked with pickle files and vector databases, and built a strong **error-handling mechanism**. Additionally, created a chat and conversation system for dynamic user interactions.
Led the development of the product, coordinating between various teams and ensuring timely delivery of features and enhancements. This comprehensive approach ensured **high reliability, stability**, and **efficiency** of the system, providing a versatile and powerful tool for users.

AUTOMATED VULNERABILITY MANAGEMENT INTEGRATION

In the project I'm actively engaged in, I harness the capabilities of Python to automate the integration of two essential security tools, Invicti and Veracode, into our workflow. This automation facilitates the efficient identification of vulnerabilities within our project and the automatic creation of issue tickets in Jira for streamlined management. Leveraging the power of **Docker**, we containerize our applications, ensuring consistency and ease of deployment. We store and manage these containers using **AWS Elastic Container Registry (ECR)**, while our applications run seamlessly on **AWS Elastic Compute Cloud (EC2)** instances. Additionally, we employ **AWS Lambda** functions to orchestrate various tasks, enhancing the scalability and efficiency of our processes. To ensure the robustness and maintainability of our Python code, we adhere to best practices and utilize Python design patterns, enabling us to write clean, efficient, and maintainable code. This comprehensive approach enhances security, reduces manual effort, and fosters seamless collaboration between our development and security teams, ensuring the swift resolution of potential threats and the delivery of secure software.

HEALTHCARE

- Our healthcare-focused project revolves around a Django REST API-driven backend, simplifying the intricate task of code auditing within clinical charts. The system involves multiple essential roles, including coders, L1 and L2 auditors, culminating with L3 auditors as the final authority. These auditors diligently review medical codes within clinical charts, ensuring accuracy and compliance. To manage data efficiently, we've employed **Django database routing**, which enables us to work with multiple databases, keeping sensitive healthcare data segregated and secure.
- For robust security measures, we've implemented **SAML and OneAuth authentication** methods, safeguarding sensitive patient information. Our commitment to performance optimization is evident through our use of a **master-slave architecture** and **sharding techniques**, ensuring that our database operations remain efficient and scalable.
- Our tech stack includes **Celery** and **RabbitMQ** for asynchronous processing, Azure-based **CI/CD pipelines** for seamless deployments, and **Docker** for containerization. **Nginx** serves as our web server, guaranteeing reliable and high-performance application delivery. This project underscores our dedication to simplifying healthcare coding processes while prioritizing data security and performance.

CUSTOMIZED PIZZA ORDERING PLATFORM

- Our project centers around a customized pizza ordering platform, with a **Flask-based microservice architecture** powering the backend. This innovative platform seamlessly integrates with renowned third-party delivery services such as DoorDash, Uber Eats, and SkipTheDishes. At its core, it empowers customers to craft personalized pizzas tailored to their exact preferences, putting them in control of every delicious detail.
- The project utilizes a **dual-database** approach for efficient data management. **Google Cloud Platform's Datastore**, a **NoSQL** database, handles non-relational data, while **PostgreSQL** manages structured relational data, ensuring data integrity and scalability.
- To automate tasks, we rely on **Jenkins**, ensuring that our workflow is streamlined and efficient. Adhering to **Python** best practices outlined in **PEP 8**, we maintain clean and readable code. We prioritize code quality through extensive **unit testing** and integration testing, validating the robustness and reliability of our platform.
- In summary, our Customized Pizza Ordering Platform represents a fusion of culinary creativity and technical excellence. It empowers customers to design their dream pizzas while adhering to the highest standards of software development and automation.

ERP SYSTEM

- I built and developed an ERP system using **FastAPI**, managing the entire lifecycle from development to deployment. This included Dockerizing the application and hosting it in **AWS ECR** and **ECS**. I implemented **load balancing** and a **rolling update** strategy to ensure **zero downtime**, and I created **task definitions** and **clusters** for efficient management. I built **multi-stage Docker** images to optimize memory usage. Additionally, I handled all **database design**, **API documentation**, task distribution, and **DevOps tasks**, including setting up message queues with **RabbitMQ** and configuring **Nginx**.