Prakash Singh

Python Lead

Email id :- singh.prksh01@gmail.com,
Phone no :- +919084699004
Address :- Dehradun, India

About Me

Hello there! I am a Python Tech lead with 8+ years of experience in creating web applications using Python, Django, Starlette & Flask, creating AI chatbots and Machine learning models.Have core competencies in Conversational Systems (NLP/Chatbots), Information Retrieval, Recommendation Systems, Prediction Systems.

In addition to my extensive Python and Django/Starlette expertise, I bring hands-on experience with GraphQL. I have successfully integrated GraphQL into web applications, leveraging its power to efficiently fetch and manipulate data. My proficiency in designing GraphQL schemas and optimizing queries contributes to building scalable and responsive applications. I am adept at utilizing GraphQL to enhance the efficiency and flexibility of web APIs.

Skills

- **Programming Languages:**
  - Python 3
  - GraphQL
- **Web Frameworks:**
  - Django, Django Rest Framework (DRF)
  - FastAPI
  - Starlette Framework
  - Flask
- **API Technologies:**
  - gRPC
  - GraphQL
- **Natural Language Processing (NLP):**
  - NLP
  - Chatbot Development using RASA framework
- **Data Science and Machine Learning:**
  - Pandas, NumPy, TensorFlow, OpenCV
- **Databases:**
  - MongoDB
  - MySQL
  - PostgreSQL

- **Cloud Technologies:**
  - Cloud Architecture
  - AWS (Amazon Web Services)
  - Amazon S3
  - EC2
  - CodeBuild
  - SES (Simple Email Service)
  - Lambda Function

Experience

2021 - Present :- Technical Lead at Eastern Enterprise

Project Overview

At EE I am involved in 2 projects-

1 - Property Management System (PMS):PMS is a comprehensive E-commerce web application designed to manage campsites across Europe. This multifaceted project comprises two primary components:

- **Backend:**The backend is built using Python, Django, and Django Rest Framework (DRF), with a special emphasis on GraphQL for efficient data retrieval and manipulation.
- **Frontend:**
  - **Admin Panel:**The Admin Panel is a robust dashboard tailored for campsite owners. It provides a centralized interface for managing campsites, reservations, and overall business operations.
  - **Booking Panel:**The Booking Panel is designed for end-users, offering an intuitive platform to explore, select, and book campsites.

Accomplishments:

- **Discount Module (Campingcard):**Successfully designed and implemented a new discount module, known as Campingcard, enhancing the overall pricing and discount strategies within the system.
- **GraphQL Integration:**Leveraged GraphQL to optimize data retrieval and manipulation between the frontend and backend components. Designed and implemented GraphQL schemas and queries to enhance the efficiency and flexibility of data interactions.
- **REST APIs:**Created RESTful APIs for both frontend components (Admin Panel and Booking Panel), ensuring seamless communication and data exchange.
- **Team Leadership:**Took charge of both backend and frontend teams, resolving blockers, fostering collaboration, and ensuring smooth project execution.
- **Availability Middleware:**Developed a common Availability middleware layer, streamlining and standardizing availability-related functionalities across all business partners.

Technology Stack:

- **Languages and Frameworks:**
  - Python, Django, Django Rest Framework (DRF)
  - GraphQL
- **Cloud and Version Control:**
  - AWS, Gitlab
- **Containerization and Orchestration:**
  - Docker, Kubernetes
- **Database:**
  - MySQL

---

2 - Fannilla (CMS - Video Content): Fannilla is a dynamic video content website that empowers creators to upload media, engage with their fans, and collaborate with fellow creators. The project follows a microservices architecture, ensuring scalability and efficiency in interactions between various services using gRPC.

- **Accomplishments:**
  - **Payment & Wallet System:**Spearheaded the development of a comprehensive Payment & Wallet system, enabling seamless financial transactions within the platform.
  - **Payment Gateway Integration:**Successfully integrated multiple Payment Gateways, including Adyen and PayPal, enhancing payment flexibility for creators and users.
  - **API Development with Starlette and FastAPI:**Developed high-performance Fast APIs using the Starlette framework and FastAPI, ensuring rapid data processing and delivery for various functionalities.
  - **GraphQL Implementation:**Implemented GraphQL alongside FastAPI to provide a flexible and efficient interface for content interactions. Leveraged Pydantic for robust data validation and schema definition within the GraphQL queries and mutations.

Technical Details:

- **GraphQL Integration:**
  - Implemented GraphQL to enhance data retrieval and manipulation.
  - Leveraged Pydantic for robust data validation and schema definition within GraphQL.
  - Created GraphQL queries and mutations to optimize content interactions.
- **FastAPI Development:**
  - Utilized the Starlette Framework and FastAPI for the development of high-performance APIs.
  - Ensured efficient handling of data requests and responses.

Technology Stack:

- **Languages and Frameworks:**
    - Python3
    - Starlette
    - FastAPI
    - GraphQL
    - Pydentic
    - SQLAlchemy
- **Communication Protocol:**
    - gRPC
- **Databases:**
    - Docker, Postgres, MongoDB

2019 - 2021 :- Tech Program Manager | secomind.ai

Project Overview

Secomind.ai is an AI based company and the main product of this company is an AI tool which interacts with the customers through different communication channels powered by Machine Learning.

This tool basically helps customers to avail different services through various channels such as SMS/text, chat, WhatsApp & social media etc.

This concept we have introduced for the US market initially where customers can order their items through text message, whatsapp while watching live matches, concerts, play etc. For this to happen we have integrated AI Module with text message service.

Accomplishments

- Created a chatbot using Rasa framework and integrated it with RestAPIs
- Worked simultaneously with E-Commerce and Data science team
- Developed Sentiment analysis model using NLP and integrated with the chatbot

Technology Stack

- Data Science: Rasa Framework(NLP and NLU), DialogFlow
- Backend: Python, Django and Flask
- Database: MongoDB
- Deployment: AWS cloud

2017 - 2019 :- System Analyst at Bed Bath and Beyond

Project Overview

Decorist is an online home decor interior design application through which Designers of our Company helps users to decor their home in a more beautiful way. Once the user purchases any of our package then the first thing they need to fill is a long Survey(questionnaire) which generally are our backend APIs and Ajax calls, so the front-end which is written in Angular loads all the APIs questions and steps associated with each Survey and once users are done with the questionnaire then they need to submit it and after that Designers are assigned to them.

Accomplishments

- Involved in Development, writing Test cases, Git affair and also actively involved in Code review.
- Involved in integrating Payment Gateway (Braintree Payment gateway) into our Monolithic Application i.e Legacy platform and also customized it like
- Developed Vault functionality in Payment service
- Developed and integrated JWT
- Worked on two Databases simultaneously (MySQL and PostgreSQL).
- Used Zappa for deploying our lambda function on AWS
- Integrated AVALARA tax calculating tool into our Monolithic Application.
- Used CELERY as a task queue, REDIS for Caching and NGINX as a web server.

Technology Stack

- Backend: Python 2.7, Django 1.11
- Frontend: Angular JS, React, HTML, Javascript, JQuery
- Database: MySQL, PostgreSQL.
- CI/CD : Nginx, Docker, Docker Swarm
- Cloud Architecture : AWS(S3, EBS, EC2, Cloudwatch, SES etc)
- Others: Celery, RabbitMQ, Redis, Memcached, JWT, Firebase monitoring tool, Avalara

2014 - 2017 :- Software Engineer at Webricots

Project Overview

Webricots is a service based company and I was working for a client which deals with Motor/Vehicle policies and also it is involved in health insurance.

This project was completely based upon Django and Django rest framework, we used Django's default admin and customize it for our sales executives as a back office portal, apart from that we also created RestAPIs for our frontend website which is primarily the first point of interaction for our end users.

Accomplishments

- Worked as a Software Engineer, Developing new functionalities, enhancing and maintaining them using Python, Django/Django Rest Framework.
- Involved in Django Admin and making key filters.
- Build Reusable code and Libraries for future use.
- Developed Login and Logout APIs for Motor Insurance domain (3rd party which used our APIs and fetch our Database)

Education

- B.Tech(Information Technology) from Indore institute of science and technology, RGPV university Bhopal with 67%.
- HSC From LAHS Mhow, Indore - CBSE Board.
- Secondary Education from Kendriya vidyalaya Bhuj (Gujrat) - CBSE Board.