

Basel Rokaya | SOFTWARE ENGINEER

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SUMMARY

Experienced Python backend engineer with over 2 years of expertise in designing and implementing scalable backend systems using Django. Strong focus on building secure, efficient, and well-optimized APIs with PostgreSQL for data management. Proficient in performance optimization, database design, and writing clean, maintainable code. Committed to continuous learning with a growing interest in system design and advanced software architecture principles. Skilled at working independently and collaboratively in cross-functional teams to deliver high-quality software solutions.

EXPERIENCE

Backend Engineer

Arkleap

August 2024 - Present, Alexandria

- Spearheaded the refactoring of a large and complex Django codebase, significantly improving performance, readability, and maintainability.
- Optimized data retrieval and processing using advanced Django ORM techniques and indexing, reducing query complexity and enhancing database efficiency.
- Led the successful integration with the **General Food Security Authority (GFSA)** of Saudi Arabia, ensuring secure and compliant data exchanges.
- Developed and maintained comprehensive unit and integration tests using **Pytest** and **Factory Boy**, improving test coverage and reducing regression issues.
- Reduced the number of production bugs by thoroughly refining the codebase and adhering to clean code principles and industry-standard practices.
- Enhanced system security by implementing secure authentication and data handling practices, including **JWT** and **SSL encryption**.
- Actively contributed to a culture of code quality and collaboration through code reviews, best practices, and mentorship within the team.

Backend Engineer

Alkharizmi Metrics | Part-time

August 2024 - Present, UAE, Dubai

- Engineered secure and scalable payment processing systems by integrating multiple payment gateways, including **Stripe** and **Fawry**, using Django and Django Rest Framework.
- Implemented **multi-currency support** and real-time currency conversion using **Django Money** and **OpenExchangeRates**, ensuring accurate financial data handling across regions.
- Developed robust payment flows, including **card validation** and **recurring subscription management**, while adhering to **PCI compliance standards** for sensitive data handling.
- **Integrated with multiple data providers** such as **Google Ads**, **Google Tag Manager**, **Twitter Ads**, **Twitter**, **Meta Pages**, and **Instagram Pages**, handling complex API integrations and data synchronization.
- **Expertly implemented OAuth2 and OAuth 1a authentication protocols** for secure third-party service access, ensuring proper token management and enhanced data security.
- Enhanced system performance by securing sensitive financial data with **encrypted fields**, minimizing the risk of data exposure.
- Designed and optimized PostgreSQL schemas for storing complex transaction data, ensuring efficient querying and data integrity.
- Built comprehensive unit and integration tests using **Pytest** to ensure code reliability across all payment modules.
- Collaborated with cross-functional teams to deliver new payment features while maintaining high standards of security and performance.

Software Engineer

Meem Development

December 2023 – August 2024, Alexandria Egypt

- Integrated a voucher and discount system using **Django** and **Saleor**, increasing customer retention by 15%.
- Resolved critical bugs related to shipping costs and warehouse management with **Django** and **Saleor**, resulting in a 20% reduction in order fulfillment errors.
- Refactored significant portions of the codebase to adopt an app architecture using **FastAPI**, improving code maintainability and scalability by 30%.
- Developed an adapter for AI models using **Langchain** to streamline communication between models and the frontend.
- Implemented a token-based return channel with **gRPC**, enhancing response efficiency by 25%.

Software Engineer Intern

Scitics

July 2022 – December 2022, Alexandria

- Directed a team of junior engineers in developing a web application, achieving over 2000 user satisfactions.
- Integrated 3+ API services with a payment gateway, streamlining transaction processes.
- Automated the scraping and processing of over 100,000 records, significantly improving data management efficiency.

EDUCATION

Bachelor of Computer and Data Science

University of Alexandria · Alexandria, Egypt · 2023 · gpa : 3.567

- Awarded a **Teaching Assistant** position due to outstanding academic performance.
- Relevant Coursework: **Data Structures, Algorithms, Database Management, System Design, Software Engineering Principles.**

PROJECTS

PDFview.nvim – Neovim Plugin for PDF Viewing

Personal Project · github.com/basola21/PDFview · November 2024 – Present

- Developed a Neovim plugin, **PDFview.nvim**, enabling users to open, view, and navigate PDF documents directly within the Neovim editor.
- Integrated with **Telescope.nvim** for efficient PDF file searching and opening within the Neovim environment.
- Utilized **pdftotext** to extract text from PDFs, facilitating easy reading and note-taking within the editor.
- Implemented pagination features, allowing users to navigate through documents using next/previous page commands.
- Provided customizable pagination settings, enabling users to define the number of lines displayed per page for optimal reading experience.
- Displayed virtual page numbers within the buffer to enhance document navigation.
- Ensured compatibility with **Obsidian** and other note-taking systems, streamlining workflows for users who integrate Neovim into their documentation processes.
- Published the plugin on GitHub, encouraging community collaboration and open-source contributions.

Used Cars Data Aggregation Platform

Personal Project · github.com/basola21/Cars · November 2024 – December 2024

- Developed a **data aggregation platform** for the **used cars market in Egypt** using **Flask** for backend development and **React** for the frontend dashboard.
- Implemented **web scraping pipelines** with **Celery** for automated daily data collection from multiple car listing websites.
- Utilized **MongoDB** for storing large volumes of scraped data with efficient indexing for faster querying and data retrieval.
- Built a **Dockerized** architecture to containerize the **Flask app, MongoDB, Celery workers, and Celery Flower**, enabling consistent deployment and easier scaling.
- Added **Celery Flower** for real-time task monitoring and job management.

- Created a **React**-based interactive dashboard for visualizing market insights, including price distributions and availability metrics.
 - Automated the entire data pipeline, ensuring **daily data refresh** and reliable analytics generation.
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SKILLS

Backend Development:

- **Languages & Frameworks:** Python, Django, Django REST Framework, FastAPI, Saleor
- **API Design & Integration:** RESTful APIs, gRPC, OAuth2, OAuth 1a, Webhooks
- **Database Management:** PostgreSQL, Django ORM, SQLAlchemy, Indexing, Query Optimization

Other Tools & Practices:

- **Collaboration Tools:** Git, GitHub
- **Development Practices:** Agile, Scrum
- **Libraries & Tools:** Pydantic, Celery (Task Queues), OpenExchangeRates, Django Money

Testing & Quality Assurance:

- **Testing Frameworks:** Pytest, Factory Boy
- **Testing Types:** Unit Testing, Integration Testing, Test-Driven Development (TDD)
- **Code Quality:** Clean Code Principles, Code Reviews, CI/CD Pipelines

Cloud & Infrastructure:

- **Containerization & Orchestration:** Docker
- **Cloud Services:** AWS (S3, EC2), Nginx
- **Deployment Tools:** Gunicorn, CI/CD Pipelines

Security & Authentication:

- **Authentication Protocols:** OAuth2, OAuth 1a, JWT, SSL/TLS
 - **Security Practices:** PCI Compliance, Encrypted Fields, Secure Token Handling
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