MASHILO KGALADI

JUNIOR SOFTWARE ENGINEER

CONTACT

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https://1mashilo.github.io/Portfolio/

2565/74 Hamilton St., Naturena, JHB South.

TECHNICAL SKILLS

- **Programming Languages**: Python, C, HTML, CSS.
- **Databases**: PostgreSQL, MYSQL.
- **Web Frameworks:** Django, Flask, FastAPI.
- **Data Science Tools:** Matplotlib, and Plotly
- **Cloud Computing Platforms**: Amazon Web Services (AWS).
- **Text editors and IDEs**: VS Code, VI, Git, WSL, and Powershell.
- **Operating system**: Linux and windows
- **Testing Frameworks**: pytest and unittest.
- **Additional Skills**: Github, Docker, dockerhub and Kubernets.

EDUCATION AND PROFESSIONAL DEVELOPMENT

Coursera.org
Containerized Applications on AWS, jan 2024

AWS
 AWS Cloud Quest, oct 2023

Alx Africa
Software Engineering, May 2023 - Present

Vaal University Of Technology
N.D Analytical Chemistry, 2015-2018

LANGUAGES

English

PROFILE

 Dedicated software engineering student, I am actively seeking entry-level roles to contribute my skills and knowledge to the dynamic field of technology. With a background in chemistry, I bring a unique perspective and analytical mindset to problem-solving. My academic journey has equipped me with a strong foundation in software development and engineering principles, with a particular focus and comfort in backend development.

PROJECTS

Project Title: Python Microservices Integration

Overview:

- Developed a Python microservices architecture.
- Utilized Django and Flask for backend services.
- Employed PostgreSQL databases for data management.
- Integrated RabbitMQ for seamless communication between services.
- Utilized Docker for containerization and deployment.
- **Django Admin Service:**
  - Manages administrative tasks and data processing.
  - Uses a dedicated PostgreSQL database.
  - Communicates with other services via RabbitMQ.
- **Flask Main Service:**
  - Handles core application logic and user-facing functionalities.
  - Utilizes a dedicated PostgreSQL database.
  - Communicates with Django Admin Service through RabbitMQ.
- **RabbitMQ Integration:**
  - Facilitates real-time communication between microservices.
  - Ensures data consistency and synchronized updates.
- **Docker for Containerization:**
  - Ensures isolation and consistency across services.
  - Simplifies deployment in various environments.

Project Title: Comprehensive Low-Level Programming Projects (ALX Software Engineering Program)

Overview:

- Completed a diverse range of projects to solidify a strong foundation in low-level programming concepts, including:Data structures (linked lists, stacks, queues, trees, hash tables)
- Algorithms (sorting, searching, recursion)
- Linux/Unix system programming
- Memory management (pointers, arrays, malloc, free)
- File I/O
- Debugging
- Static and dynamic libraries
- Shell scripting
- Key Projects:
- Simple Shell: Developed a functional command-line interpreter (shell) in C to navigate the file system and execute commands.
- Data Structures: Implemented various data structures (linked lists, stacks, queues, trees, hash tables) to model and organize data efficiently.
- Algorithms: Optimized code performance through sorting and searching algorithms, applying Big O notation to analyze time and space complexity.
- System Programming: Built proficiency in system calls, file I/O, and process management techniques for Linux/Unix environments.

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KEY COMPETENCIES:

Technical Problem-Solving:

- Analytical Skills
- Critical Thinking
- Debugging Skills
- Learning Agility

Effective Communication:

- Technical Explanations
- Collaboration and Teamwork
- Written Communication
- Active Listening

Project Management and Organization:

- Time Management
- Organization and Planning
- Attention to Detail
- Initiative and Proactive Approach

PROJECTS

Project Title: Diverse Higher-Level Programming Projects (ALX Software Engineering Program)

Overview: 2023

- Completed a range of projects to demonstrate proficiency in Python, JavaScript, SQL, and associated concepts, including:Core Python fundamentals (data structures, control flow, functions, OOP)
- SQL for database interaction
- JavaScript for web development
- Object-relational mapping (ORM)
- Networking concepts
- Key Projects:
- Python Object-Oriented Programming: Developed object-oriented applications using Python's classes, inheritance, and polymorphism.
- SQL Mastery: Demonstrated proficience in SQL queries for database interaction, including data retrieval, manipulation, and analysis.
- Object-Relational Mapping (ORM): Applied ORM techniques to bridge the gap between Python objects and relational databases, simplifying data persistence.
- Web Development Exploration: Gained exposure to web development concepts through JavaScript projects, covering object manipulation, web scraping, and jQuery.

                                                                            2023
Project Title: Multivendor Django Backend for Digital Marketplace

Overview:

- Developed a comprehensive backend infrastructure using Django to support a multivendor digital marketplace, enabling product management, sales analytics, user registration, and secure payments.
- Key Features:
- Product Management: Implemented a robust system for creating, editing, and deleting products, including features for associating products with sellers and showcasing detailed product information.
- Sales Analytics: Empowered vendors with actionable insights through features that track total sales, generate statistics based on daily, monthly, and yearly trends, and analyze product-specific sales performance.
- User Registration and Authentication: Built secure user management, allowing registration for vendor accounts, authentication for protected actions, and providing a dedicated vendor dashboard for product management.
- Seamless Checkout with Stripe Integration: Ensured secure transactions by integrating the Stripe payment gateway, enabling card payments and a streamlined checkout process.

Project Title: Python Data Visualization Scripts with Matplotlib and GitHub API Integration

Overview: 2023

- Developed Python scripts employing Matplotlib to create diverse data visualizations, covering scatter plots, random walks, and cubic number plots.
- Enhanced project capabilities by leveraging the GitHub API to fetch and analyze data on popular Python repositories.