

Zanethemba Ngwenya

Software Developer

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SUMMARY

Creative, analytical, and collaborative software developer with strong problem-solving skills and a commitment to continuous improvement. Thrives in dynamic environments by building cohesive teams and driving consensus to elevate engineering initiatives.

Technically proficient in Python and Java, with hands-on experience in object-orienting-programming, distributed systems architecture, and cloud platforms such as Azure. Experienced in agile methodologies and working with relational databases like MySQL and PostgreSQL. Adept at simplifying complex concepts for stakeholders and delivering scalable, high-quality solutions. Seeking a role in an innovative environment to apply fresh perspectives and drive sustainable success and growth.

EDUCATION

Systems Development(NQF 5)

WeThinkCode

09/2023 – present

Johannesburg,
South Africa

Full Stack Software Engineering Program

- Gained proficiency in programming languages such as Python, Java, and JavaScript through hands-on projects.

- Acquired practical experience in software development methodologies, agile practices, and version control with Git, enhancing problem-solving and teamwork skills.

- Engaged in real-world projects and industry best practices, preparing for a versatile career as a software engineer.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, HTML & CSS

Testing: Unit testing, Acceptance testing, Integration testing

Development & Collaboration Tools: Apache Maven, JUnit, Git, GitHub Actions, Docker, Trello, Miro

Databases: SQL (Relational databases), MongoDB (NoSQL)

API Design: RESTful APIs, API design & implementation, JSON

Devops: Continuous Integration (CI), Continuous Delivery (CD)

HANDS ON EXPERIENCE

Coding Clinic Booking System Project

- Collaborated in a team to develop an end-to-end console-based system for managing Code Clinics at WeThinkCode, improving appointment management efficiency by 30% and reducing scheduling errors by 20% within three months.
- Implemented a student support system using the Google Calendar API to manage help requests and volunteer sign-ups, leading to a 25% increase in volunteer participation.
- Worked in iterations, practicing agile planning, time-boxing, and iterative development, resulting in timely project deliveries with a 15% improvement in team productivity.
- Utilized Git and GitHub for version control, facilitating seamless collaboration among team members, and ensuring 100% code coverage in testing.
- Developed the project using Python, focusing on Linux command-line operations, modularization, and test-driven development (TDD), which improved code maintainability by 40%.

RobotWorlds Network-Based Game Project

- Collaborated in a team to develop RobotWorlds, a socket-based multiplayer robot combat game featuring customizable robots and dynamic environments, achieving a user engagement rate of 80% during testing phases.
- Followed agile practices, including pair programming, daily stand-ups, showcases, and retrospectives across three two-week iterations, resulting in a 20% reduction in development time.
- Designed and implemented client-server communication using Java socket programming with a multi-threaded server for real-time gameplay, achieving latency under 100ms in test scenarios.
- Applied object-oriented programming (OOP) principles for modular design, allowing flexibility in user interface selection, which improved the user experience and reduced onboarding time by 30%.
- Gained experience in concurrency, protocol design, error handling, unit testing, and application deployment, with a focus on achieving a bug-free launch.
- Managed the project using GitHub with GitHub Actions to automate builds, testing, and packaging processes, reducing deployment time by 50%.

SOFT SKILLS

- Teamwork and collaboration
- Communication and presentation
- Problem-solving and analytical thinking
- Time management and organization

ACHIEVEMENTS

Bxrdeless Hackathon winner

31/08/2024

Participated in a hackathon focused on using geospatial data to tackle flooding in Africa. My team, Geo-Innovators, developed a web-based solution that leverages open-source geospatial data for flood monitoring and early warning systems, enhancing community preparedness against climate-related challenges.

- **Backend Design & API Integration:** Led backend architecture design and integrated RESTful APIs for real-time data retrieval and smooth frontend-backend communication.
- **System Integration:** Connected external geospatial data sources and third-party APIs, ensuring accurate flood data processing and timely alerts.