TSHEPANG KAGISO MASHIGO

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Personal Profile

Dedicated and hard-working software engineering student with a passion for backend technologies. Motivated by the challenge of implementing complex business logic in APIs and integrating them with databases to build scalable, cutting-edge systems. Committed to continuous learning and staying current with emerging technologies to deliver impactful and innovative IT solutions.

Education

- Bachelor of Computing Science, Belgium Campus iTversity
- Software Architecture for Modern Large-Scale Systems Udemy
- Master ASP.NET Core Identity: Authentication & Authorization Udemy

Projects

Security Drone Monitoring System – Full-Stack IoT Surveillance

- Built a real-time surveillance platform with DJI Tello drones using Python and Node.js.
- Backend: Python (OpenCV, diitellopy, asyncio) for drone control and video analytics.
- Frontend: Node.js, Express.js, EJS, JWT, MongoDB.
- Enabled live video streaming, YOLO-based threat detection, patrol logic, and secure API with Socket.IO.

E-Commerce Microservices Shop – Cloud-Native Full-Stack Project

- Built modular microservices in .NET 9 with DDD, CQRS, and Clean Architecture.
- Integrated PostgreSQL, SQL Server, SQLite; used RabbitMQ, MassTransit, gRPC for communication.
- Frontend: ASP.NET Razor Pages; API Gateway with YARP; fully containerized via Docker Compose.

WiredMindsBC Backend – Auth System with Node.js

- Built a secure backend with Node.js, Express, and EJS.
- Implemented JWT-based authentication, route protection, session handling, and custom middleware.

Technical Skills

- Languages: C#, Python, JavaScript, HTML & CSS
- **Backend Frameworks:** ASP.NET Core, Node.js, Express.js, Flask
- Databases: SQL Server, PostgreSQL, MongoDB, SQLite
- Tools & Technologies: REST APIs, gRPC, Git, Docker, Kubernetes, Agile
- Software Design & Concepts: Software Architecture, DDD, CQRS, Clean Architecture, Machine Learning
- **Soft Skills:** Communication, Teamwork, Adaptability

Leadership & Experience

Student Representative Council (SRC) Head of Department — Belgium Campus iTversity 2023 – 2024

- Led and managed the Student Relations Department, driving initiatives to enhance student engagement and communication.
- Mentored first-year SRC members, developing their leadership skills and fostering effective contributions to the council.
- Recognized for exemplary leadership, professionalism, and innovation, leaving a lasting positive impact on the SRC and student body.

Peer Tutor — Belgium Campus iTversity 2024 – 2024

- Provided academic tutoring in Mathematics, Machine Learning, and Linear Programming for undergraduate computing students.
- Demonstrated exceptional organization and time management in preparing and delivering effective tutoring sessions.
- Maintained high professionalism in all interactions with students, lecturers, and support staff.

Student Representative Council (SRC) Member — Belgium Campus iTversity 2022 – 2023

- Represented student body interests.
- Organized events and initiatives to enhance student life.
- Participated in strategic planning and departmental feedback sessions.