Gideon Vermeulen

Software Developer & AI Enthusiast

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Stellenbosch, South Africa

Profile

Third-year Bachelor of Computing student passionate about robotics, web development, and machine learning. Aiming to solve real-world problems using IT solutions. Experienced in building both frontend and backend components of applications, especially in educational and research-focused settings.
Quick to learn, collaborative, and eager to solve new problems through code. Seeking internship opportunities to gain real-world experience and contribute to software development projects.

Education

Belgium Campus iTversity — Stellenbosch Campus

2023 - Present

Bachelor of Computing (BComp) — 3rd Year

Areas of focus: Software Engineering, AI, Web Development

Selected to participate in UCLL International Project focusing on combating water hyacinth through innovative IT solutions.

Paul Roos Gimnasium

Matriculated 2022

National Senior Certificate

Technical Skills

Languages

JavaScript | TypeScript | C# | Java | Python | SQL | HTML/CSS | C++ (Arduino)

Frameworks & Libraries

Node.js | Express.js | Flask | .NET | scikit-learn | TensorFlow | YOLO

Databases

Microsoft SQL Server | SQLite | MongoDB | PostgreSQL | Redis | MySQL | Java DB

Tools & Platforms

Git & GitHub | Postman | Docker | Arduino | AWS | Docker

Projects

CampusLearn Full-Stack Platform

Node.js | TypeScript | MongoDB | Redis | Socket.IO | WebRTC | Docker | AWS | CI/CD | REST API | JWT

A comprehensive educational platform connecting students and tutors, featuring a performance-oriented backend. The system includes real-time chat, a forum with live voting, video calling via WebRTC. The architecture leverages Node.js with TypeScript, using Redis for caching, MongoDB for persistence, and Socket.IO for real-time event handling. The entire application is containerized with multi-stage Docker builds and deployed on AWS via a full CI/CD pipeline using CodeBuild and ECS.

ULP95 Fuel Price Prediction

Python | scikit-learn | Flask | Public API's

Predicts fuel prices in the South African coastal region using machine learning. Integrates web scraping and API input to automate predictions.

Water Hyacinth Detection

YOLOv8 | Python | Arduino | IoT

YOLOv8-based object detection model to identify water hyacinth. Created Arduino-powered demo as part of international project.

Student Grade Prediction

Python | scikit-learn | Flask | ANN

ANN powered student grade classifier built in Python with scikit-learn, deployed via Flask on Render.