

Christopher Wawa

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EDUCATION

Belgium Campus ITversity

Bachelor of Computing in Software Engineering Honours

Johannesburg, Gauteng

January 2023 – Present

Birchleigh High School

Bachelor's Pass

Johannesburg, Gauteng

January 2018 – December 2022

TECHNICAL SKILLS

Programming Languages: C#, Java, Python, JavaScript, HTML, CSS

Frontend: React, Tailwind CSS

Backend and Frameworks: Node.js, Express.js, Django, Flask, ASP.NET Core, ASP.NET Web API, Spring Boot, RESTful APIs

Databases and Data Tools: PostgreSQL, MongoDB, Microsoft SQL Server, Transact-SQL, Mongoose, Supabase

Tools and Cloud: Git, GitHub, AWS, VS Code, Visual Studio, IntelliJ

Other: Agile methodologies, data structures, object-oriented programming, problem-solving

EXPERIENCE

Private Tutor

Belgium Campus

Johannesburg, Gauteng

January 2025 – June 2026

- Tutored selected students in Web Programming and general programming, providing one-on-one guidance on programming concepts, problem-solving, and practical coursework.

PROJECTS

Full-Stack MERN Personal Financial Analytics Platform — React, Node.js, MongoDB, Express [\[Github\]](#)

- Engineered a fully responsive personal financial analytics platform using the MERN stack and Tailwind CSS.
- Implemented **JWT-based authentication** for secure user login and registration, with profile image upload functionality.
- Built **income and expense management** features with interactive financial dashboards and data visualisations.
- Implemented **Excel data export** and a responsive interface optimised for desktop, tablet, and mobile devices.

Full-Stack AI Kanban Board (Flowboard) — React, Node.js, Express, PostgreSQL [\[Github\]](#)

- Developed an AI-powered project management platform using the PERN stack, Google Gemini AI, and Socket.IO.
- Integrated **Google Gemini AI** to generate prioritised backlogs, subtasks, and sprint summaries from natural-language goals.
- Implemented **real-time collaboration** with live drag-and-drop, user presence indicators, and instant task synchronisation using Socket.IO.
- Built **authentication, board sharing, task CRUD operations, activity logging, and workspace analytics** using PostgreSQL hosted on Neon.

Linear & Integer Programming Optimisation Solver — C#, .NET 8 [\[Github\]](#)

- Developed a menu-driven C#/.NET 8 **optimisation solver** for Linear Programming and Integer Programming models using object-oriented design principles.
- Implemented optimisation algorithms including **Primal Simplex, Revised Simplex, Branch and Bound, Gomory Cutting Plane, Two-Phase Simplex, and Dual Simplex**.
- Built comprehensive **sensitivity analysis** functionality for objective coefficients, constraint RHS values, shadow prices, duality, and model modifications.
- Implemented **infeasible and unbounded model detection**, dynamic text-file parsing, result exporting, and nonlinear optimisation using Golden Section Search.

LEADERSHIP AND ACTIVITIES

Chess Club

Club Captain

Johannesburg, Gauteng

January 2024 – December 2024