

Waldo Blom

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EDUCATION

Hoërskool Garsfontein
National Senior Certificate

Pretoria
Graduation Date: 2022

Belgium Campus
Bachelor of Computing

Pretoria
Graduation Date: 2027

SKILLS

Skills: C#, .NET Framework, JavaScript, HTML5, CSS3, Node.js (Express.js), Python, SQL, MS SQL, MongoDB, Git Version Control, GitHub, Linux (Basic terminal commands).

Developing Skills: Next.js, React, Typescript, Tailwind CSS.

Interests: I enjoy breaking down problems to fully understand their root cause, then designing and building practical solutions, often in the form of web applications or small tools. Outside of development, I'm often on the golf course or at the driving range.

UNIVERSITY PROJECTS

Sign Speak AI ([waldoblom.github.io/PRJ381/](https://github.com/waldo-blom/PRJ381))

Apr 2025 - Oct 2025

- Aims to build a web-based application using a custom CNN + LSTM AI model to translate sign language gestures to text and then into real-time speech, facilitating communication between deaf and hearing individuals.
- Built using Node.js, Express, Python (Flask), PyTorch, MediaPipe, MongoDB, WebSockets, WebRTC, JavaScript, Canvas, pytsx3.
- Orchestrated the integration of the AI detection model into the application's front end using WebSockets and WebRTC, enabling real-time display on the website.

Sky High - Superhero Management System (<https://tinyurl.com/PRG282SkyHigh>)

Oct 2025 - Oct 2025

- Tasked with building a C# Windows Forms application for managing superhero records. Built using C# Windows Forms and a file-based database.
- Led the project team, overseeing planning and design while enforcing proper Git version control practices, resulting in a well-managed project that achieved a final mark of 100%.

PERSONAL PROJECTS

Portfolio Website (<https://waldoblom.com>)

2025 – Present

- Developed a personal portfolio website showcasing my projects and technical skills.
- Currently enhancing the project by migrating from a static HTML, CSS, and JavaScript implementation to a modern stack using Next.js and React to improve scalability, performance, and maintainability.

AI-DRIVEN DEVELOPMENT PROJECTS

RangeMaster (<https://tinyurl.com/RangeMasterV1>)

Dec 2025 - Feb 2026

- The application enables golfers to track and score different aspects of their game, storing data over time to analyse performance trends and identify areas for improvement. The platform currently has 43 active users.
- Developed using Firebase Studio, leveraging its integrated Gemini AI-assisted development capabilities. Built with Next.js, React, TypeScript, and Tailwind CSS, and integrated with Firebase Authentication and Firestore.
- Designed and implemented backend functionality for data storage and retrieval and contributed to UI improvements that enhanced overall user experience.