

Willem Harmse

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Education

Hoërskool Schoonspruit, Klerksdorp, North West

Attended: 2017-2021

North West University, Potchefstroom, North West

Bachelor of Science, Information Technology

Attended: 2022-2024

Expected Graduation Date: 2025

Academic Projects**Encryption Project**

The project was about researching encryption algorithms and using our knowledge to create our own encryption algorithm. We had to create an application that uses our algorithm to encrypt and decrypt files. I was the group leader and helped with the development and documentation.

- Technologies used: Java.
- Outcome: We had success and received 100% on the project. The encryption and decryption were hard to master but our team worked tirelessly to master it.

Full system for a company

The project required the creation of a scenario of our own for which we had to develop a system which they could use. It required working with many different technologies to create. I was the group leader of the team.

- Technologies used: C#, SQL Server, SQL.
- Outcome: We received 77% on our project we made some mistakes which I personally learned from and improved upon.

Networking Project

This project consisted of multiple parts, the network design using Cisco which I did not assist in, this was divided between other group members. Then there was the chat application which I created for the group.

- Technologies used: Next.js, Chat Engine, Vercel, Electron.
- Outcome: We received 100% overall for the project, this project taught us many new skills.

Virtual CV

This was our second last project, and it required us to create a portfolio webpage hosted on GitHub Pages where we could display our CV. This required us to use HTML, JavaScript and CSS. We created these webpages and added our own special features.

- Technologies used: HTML, CSS, JavaScript.

- Outcome: I received 86% for this project.
- Webpage: <https://willemharmse.github.io/VCV/>

Full stack application

This project was our final year project where we had to develop an application for a school. This application had a backend, frontend and a mobile application. We had to allow the users to upload video submissions to the system using the mobile application, where the lectures could then grade those submissions using the web application. I was the group leader of the project. This project allowed me to gain skills in Node.js, Flutter and React.

- Technologies used: Node.js, MongoDB, Azure Blob Storage, React, Flutter, Express, Winston (Used for logging API requests), GitHub (Used for version control and collaboration).
- Outcome: This project was divided into two parts.
 - Part 1: This was the backend that had to be submitted, we received 77% for the backend.
 - Part 2: This was the entire application that had to be marked, this included the frontend, mobile application and backend. For the part we received 85%.

Extracurricular Activities

Chess Club

Role: Member

Responsibilities: Participated in weekly meetings and tournaments, improved strategic thinking and problem-solving skills.

Student Government

Role: Position Held

Responsibilities: Represented student body, helped organize school events and activities, collaborated with school administration to address student concerns.

Skills

Technical Skills:

Programming languages:

- C++
- C#
- Delphi
- Python
- Java
- Flutter

Scripting languages

- HTML with CSS and JavaScript
- SQL
- React
- Node.js
- Next.js

Tools used:

- Azure Blob Storage
- GitHub
- Vercel
- Electron
- VS Code

Databases:

- Microsoft SQL Server
- Oracle
- MS Access
- MongoDB

Soft Skills:

- Teamwork: University group projects taught me a lot about working in a team as we regularly had group assignments which we had to complete.
- Problem-solving: I have great problem-solving abilities, as I do not panic once something does not proceed as I expected it to.
- Leadership: I have a great time leading teams to complete their duties and completing projects. I find it encouraging to aid the team in the development of projects and not just let them do all the work.

Achievements

Golden Key Honour Society

It is an honour society which invites students to join them if the student is in the top 15% of the degree group. I received this invitation to join and joined in April of 2023.

Clothes of Honour

It is a blazer which is awarded to a student in high school that has for 4 years earned an average of 80% and more. The date I received the clothes of honour was in February 2020.