Jess Koekemoer

Computer and Electronic Engineering Student, Final Year

📞 072 361 2459

✉️ jesskoekemoer@gmail.com

Social Network ————

in LinkedIn Profile Page Link

🐙 Github Page Link

📷 Instagram Art Page Link

Programming ————

📈 Matlab and Simulink

🗄️ SQL

📄 LaTeX

🖥️ Delphi

© C++

⬡ C# , C

📊 PLC Ladder Logic

📜 Python

🌐 HTML, CSS

🔒 PHP

🔒 JavaScript

Personal Statement

I am a final year Computer and Electronics Engineering Student with background knowledge of numerous engineering processes and ethics.

I have experience regarding several programming languages, embedded programming, and building basic circuit elements, such as amplifiers, LCD display connections, and filters. I have utilized my programming skills in my final year project, regarding geospatial analysis, and to perform data analysis, handle databases, make timing operations, create small games, and compose high-quality documents and reports.

I always aim to broaden my horizons and gain experience.

Working Experience

03/19 – 06/19 — **Lecturer's Assistant** — North West University
Responsible for helping students participating in the algorithms and optimization module, assessing their performance, and organizing various paperwork.

06/18 – 08/18 — **Intern** — NWU Solar Car
Participant in multidisciplinary team, made a detailed marketing plan and budget, created logos and clothing designs for the team, and improved personal presentation and leadership skills.

06/17 – 08/17 — **Intern** — NWU Solar Car
Participant in solar car manufacture, including supervising the robotic arm, carbon fibre moulding, sanding, designing the car's control panel layout, and cleaning of the workshop premises.

04/13 – 05/13 , 04/14 – 05/14 — **Volunteer** — RSPCA Klerksdorp
Kept rescued animals fed, clean, and socialized; played a key role in several pet adoptions; and performed maintenance on the enclosures.

Education

2015 – 2019 — **B. Eng Electronic and Computer Engineering with Honours** — North West University
(Currently in final year of completion)

2014 — **National Senior Certificate** — Curro Klerksdorp
Matric certificate for 7 subjects, including **Information Technology** (7), **Mathematics** (6), **Natural Science** (5), and **Engineering Graphics and Design** (6).

Professional Certificates

2017 — Siemens S71200 Micro Advanced Course (TIA-MICRO2)

2017 — Cisco CCNA Routing and Switching

2016 — Siemens S71200 Micro Course (TIA-MICRO1)

2015 — Certified SolidWorks Associate (CSWA)

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Languages ——

🇬🇧 English ● ● ● ● ●
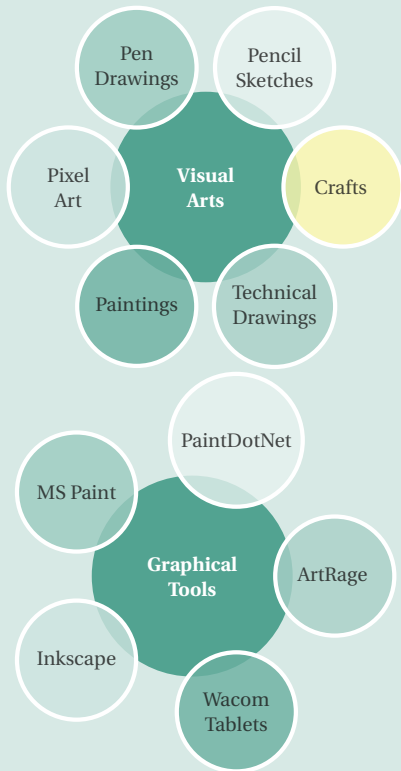🇿🇦 Afrikaans ● ● ● ○ ○
🇵🇹 Portuguese ● ○ ○ ○ ○

Final Year Project ——

My final year project involves the creation of a high-performance library for geographical analysis.

The library contains functions which are able to extract a path or elevation profile based on provided coordinates, digital elevation models, and calculation options.

In order to solve this complex engineering problem, extensive research and planning had to be conducted. After a detailed design was created for the solution, the library and an independent GUI were implemented and tested in Matlab.

Graphical Skills ——

Other Files ——

🖼️ Visual Art Portfolio
🎮 Dragon Tower Defence Game

Technical Skills

Programming Languages	C#, C++, C, Delphi, Python, HTML, CSS, SQL, JavaScript, PHP
Matlab and Simulink	Data analysis, neural networks, GUIs, telecommunication simulations, geographical data analysis, and more
LaTeX	(This document included)
LTSpice	Circuit simulation and custom components
Multisim	Circuit simulations
Cisco Packet Tracer	Network simulations
Fritzing	Circuit schematics and PCB design
Git	Version control and management
PLC Ladder Logic	Programming experience with Siemens devices
SolidWorks	Mechanical parts, assemblies, and electrical routing
MS Office	Excel, Word, PowerPoint, Access, Visio, Project
Graphical Skills	Technical drawings, pixel art, pen and pencil sketches, and more

Awards

2014	Provincial Colours in Videogaming (Starcraft II and Osu)
2011 – 2014	High School Honours Society Member
2013	Silver for the English Olympiad

Personal Interests

Vintage Cars	Owning and maintaining a vintage car, attending car shows
Visual Arts	Painting, sketching, and pixel art, among others
Reading	Both factual and fictional books, mostly biology and fantasy genres respectively
Videogames	All genres, mostly role-playing, strategy, or adventure games
Bird Watching	Visiting bird sanctuaries, observing avian behaviour, and raising orphaned chicks
Fishing	Salt-water coastal fishing, preferably on rocky shores

References

References are available on request.