

# Cobus Uys

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**Email:** jluysvi@gmail.com

**Phone:** (071) 603-2866

**Location:** Bloemfontein, South Africa

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## Core Skills

- The applicant is well **experienced in the design, programming and implementation of embedded control systems**, having worked as an automation technician at Power Super Capacitor.
- Is very proficient with **C++ in resource constrained applications** and has a good working knowledge of **Python and C** and **REST Web API's**. Also has a good grasp of **Git**.
- Supplementary skills include: **CAD design** for mechanical parts and sheet metal using Fusion360 and Onshape/Solidworks, **PCB design** for industrial controllers using Altium and EasyEDA, and **CNC-machine operation** for manufacturing of intrial machinery parts.
- Has a **broad range of experience** which allows him to **adapt very quickly** to a new technology or environment.

## Work Experience

### Power Super Capacitor

**Automation Technician** - *Bloemfontein, South Africa*

November 2022 – Present

- Designed and implemented **advanced mechanical and control systems** for new production line machinery, increasing factory efficiency by a large margin, primarily by automating tasks usually done by hand.
- Applied expertise in **embedded C++** to create **exceptionally reliable** and **bug free** control progams for industrial machinery.
- Used **HMI design** skills to create interfaces for factory machines.
- Learned **CAD design (Fusion 360, Onshape)** on my own in order to design new mechanical parts and enclosures for the factory machines.
- Learned **PCB design (Altium Designer, EasyEDA)** in order to develop a controller for automatic cell discharging with cell-level control and energy reclamation, significantly reducing energy waste.
- Expanded skill set to include **Git, IoT, REST API's, Python and CNC operation**, contributing to the **continuous improvement of production systems**.
- Reused **Delta PLC's** from older machines for new automation tasks.

### Jim Fouche Hostel

**Hostel Supervisor (Part-Time)** - *Bloemfontein, South Africa*

June 2022 – October 2023

- Guided learners in their studies, enforced discipline, **and managed administrative tasks**, fostering a positive learning environment.

- Created an **automated system** for tracking disciplinary records and learner data, using **Google Forms and Python** which reduced physical paper usage.
- Developed strong **interpersonal and leadership skills** through daily interactions with learners and staff.

## Delta Solar

**Temporary Worker** - *Middelburg & Bloemfontein, South Africa* January 2022 - May 2022

- Designed and installed and programmed **HMI's(Nextion)** for many application including a pyrolysis plant and fume hood controllers used at **Sol Plaatjie University**.
- Learned many useful skills like **welding, grinding and control board wiring**.

## Leeuwenkuil Family Vineyards

**Harvest Helper** - *Stellenbosch, South Africa*

January 2022 – March 2022

- Assisted in processing grape harvests for wine production, ensuring **timely and efficient processing** during peak season.
- Managed various responsibilities, including **operating machinery** and **supervising temporary workers**, contributing to the **smooth operation of the vineyard**.

## Education

University of South Africa (UNISA)

**BSc in Computer Science**

First Year - Expected Graduation: 2026

- **Relevant Coursework:** Programming, Linear Algebra, Calculus, Computer Architecture
- **Achievements:** Consistently high marks, aligning academic knowledge with professional experience.

## Interests and Achievements

Interests:

- **Programming:** Even when not working, he still codes side projects for profit or for fun. Likes to continually improve his skills, even in his spare.
- **Guitar:** Playing and composing music, which enhances creativity and discipline.
- **Cooking:** Experimenting with recipes, which fosters patience and attention to detail.

Achievements

- Designed and programmed most of the machines that are used on the production line of Power Super Capacitor. The machines are incredibly reliable.
- Before going to university he taught himself programming and later CAD design and PCB design as well.
- Designed an HMI for fume hoods that are used at Sol Plaatjie University.
- Completely rebuilt the suspension and fueling system of a Defender 130 as a side project.