

# Cobus Uys

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**Location:** Bloemfontein, South Africa

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## Core Skills

- Experience **designing, programming and implementing embedded control systems**, having worked as an automation technician at a company designing and manufacturing supercapacitors.
- Proficiency with **C/C++ in resource constrained applications** combined with knowledge of **Python** and **REST Web APIs**, good grasp of **Linux Shell and Git**.

## Supplementary Skills

- **CAD design** for mechanical parts and sheet metal using Autocad, Fusion360 and Solidworks.
- **PCB design** for industrial controllers using Altium and EasyEDA.
- **CNC machine operation** for manufacturing machinery parts.
- Adaptability honed by exposure to different technology environments.

## Achievements

- Designed and programmed most of the machines that are used on the current company's production line. The machines are very reliable.
- 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.

## 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 done manually in the past.
- Applied expertise in **embedded C/C++** to create **exceptionally reliable** and **bug free** control programs for industrial machinery.
- Used **HMI design** skills to create interfaces for factory machines.
- Self-study to gain sufficient knowledge to utilise **CAD design (Fusion 360, Onshape)** to design new mechanical parts and enclosures for the factory machines.
- Self-study to gain sufficient knowledge to utilise **PCB design (Altium Designer, EasyEDA)** 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 APIs, Python and CNC operation**, contributing to the **continuous improvement of production systems**.
- Reused **Delta PLCs** 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 **HMIs(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.

### High School Fichardtpark

**National Senior Certificate** (2020)

## Interests:

- **Programming:** Coding in spare time for profit or fun, constantly expanding skill set.

- **Guitar:** Playing and composing music, which enhances creativity and discipline.
- **Cooking:** Experimenting with recipes, which fosters patience and attention to detail.