

SAMEER SHABOODIEN

Master of Engineering (Electronic)

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EXPERIENCE

Electrical Engineering Intern

Octoco

📅 29 Jun 2023 – 10 Jul 2023

- **Decrypted Metering Protocol:** Decoded and documented a discontinued electricity meter's protocol, creating custom interfacing software for external hardware integration.
- **Achievement:** Awarded a performance bonus for outstanding project completion.
- **Skills Developed:** Low-level protocol decoding, problem-solving, initiative-driven work.

Hardware Analyst (Contract)

Octoco

📅 11 Jul 2023 – 14 Jul 2023

- **Hardware Debugging:** Resolved maintenance issues on over 100 PCBs for an international agricultural project, identifying recurring design flaws.
- **Skills Developed:** Hardware debugging, design flaw identification.

Junior Software Developer and Electrical Engineer (Contract)

Octoco

📅 11 Sep 2023 – 15 Sep 2023

- **Wireless Meter Interface:** Improved C software for interfacing with over 200 GSM modems, fixing bugs and refactoring code.
- **Hardware Error Analysis:** Resolved interference issues causing random bitstreams during communication.
- **Skills Developed:** Software development, wireless communication, systematic interference identification.

Radio Frequency Engineering Intern

Lantern Engineering

📅 23 Nov 2022 – 7 Feb 2023

- **Unit Testing:** Used software tools to achieve full coverage for a large radio project.
- **IoT Integration and Debugging:** Integrated a Raspberry Pi with an array of IoT MATTER devices, identifying and addressing an EMI protection flaw.
- **Environment Setup:** Developed software for UART and I2C communication on an older IDE and chipset.
- **Skills Developed:** Unit testing, low-level software development, IoT integration, research.

EDUCATION

MEng in Electronic Engineering

Stellenbosch University

📅 2025 – 2025

- **80% grade**, completed *cum laude* in half the standard duration.

BEng in Electrical and Electronic Engineering

Stellenbosch University

📅 2021 – 2024

- **70%** four-year GPA; ranked **22/88**.
- Honours year (machine-learning focus): **72%** GPA, **80%** thesis grade.
- Golden Key South Africa member (top 15% faculty).

High School (NSC)

Bishops Diocesan College

📅 2016 – 2020

- **90%** matric average; **8 distinctions**.
- Top Alpha Mathematics student.
- Top 10 in province for Economics.

LEADERSHIP

- **Class Representative & Teaching Assistant**, Stellenbosch University.
- **Vice-Chair**, Bishops Community Service Organization (100+ members).
- **Best Student Award (Leadership)**, European International Programme.

SKILLS

- Hardware & PCB design; Electric vehicle & telematics systems.
- Full-stack development: Cloud (AWS), React.js, Next.js; C, Java, Python.
- Machine learning; computer vision.
- Adobe Creative Suite.
- Project management (IPMA SA certification).
- English fluency; working Afrikaans; basic French.
- Debating (half-colours, Bishops).

ACHIEVEMENTS

- Gold President's Award (community service; 200+ hours).
- Successful entrepreneurial ventures up to 5-figure revenues.
- Scholarships: Dell Young Leaders; Mark Shuttleworth Foundation; Crossley Fund; various merit awards; Nedbank Mike Brown.
- 11th nationally — Allan Gray Entrepreneurship Challenge (1,000+ participants).
- Western Province representation — judo and indoor cricket.
- A-team member — hockey and soccer (school and club).