

Tamryn Osler

Electrical & Computer Engineering — final year, University of Cape Town

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PROFILE

Final-year engineering student working towards high performance computing, with internship experience across electromagnetic communications software, banking software and AI. I like problems that look finished but aren't. Looking for *2026/27 vacation work* and *postgraduate study from 2027*.

EDUCATION

- | | |
|-------------|--|
| 2023 - 2026 | BSc(Eng) Electrical & Computer Engineering
UNIVERSITY OF CAPE TOWN <ul style="list-style-type: none">— 86% current GPA— Dean's Merit List — first, second and third year— Class medals (top of the course) — MAM1020F, PHY1013S, PHY2010S |
| 2018 - 2022 | National Senior Certificate (IEB)
KINGSMEAD COLLEGE <p>91% average · 10 distinctions · <i>Dux Scholar</i> · top 1% nationally in Mathematics, Physical Sciences and Life Orientation</p> |

EXPERIENCE

- | | |
|----------------|--|
| 2025 - present | Student Tutor
UNIVERSITY OF CAPE TOWN
Embedded Systems I (EEE2046F/S) <ul style="list-style-type: none">— Tutor undergraduates through embedded systems concepts, design and debugging.— Teaching the material has sharpened how I explain technical work — and my own grasp of it. |
| 2025 - 2026 | Vice Captain
TEAM CHPC SOUTH AFRICA
ISC 2026 Student Cluster Competition · Hamburg, Germany <ul style="list-style-type: none">— Led the AI benchmark task and coordinated its technical delivery.— Ran team administration, organisation and work allocation alongside the technical work. |
| 2024 | Software Engineering Trainee
CAPITEC
Stellenbosch · internship <ul style="list-style-type: none">— App-side software development, including work on the remote app-onboarding process.— Time in Core Architecture, seeing how delivery works in a large production organisation. |
| 2023 - 2024 | Software & Signal Processing Intern
PERALEX ELECTRONICS
Electromagnetic communications software · Cape Town · internship <ul style="list-style-type: none">— Developed part of the PXGF processing toolchain, the in-house library their signal work is built on.— Added filter design, time shifting, spectrogram generation and signal decoding to it. |

PROJECTS

- 2026 · in progress FM passive radar on a single-board computer
FINAL-YEAR THESIS
- Detection using broadcast FM transmissions the receiver never emits itself. In simulation now, moving onto hardware; due late October / early November.
- 2026 Antarctic sensor buoy — communications and storage
FOURTH-YEAR DESIGN PROJECT
- Owned the buoy-to-ship link: long-range LoRa for locating the buoy, short-range high-speed WiFi for offload. Antenna design and build, including a directional Yagi, with range testing on hardware.
- 2025 - 2026 Three-node cluster, built and tuned under a power cap
STUDENT CLUSTER COMPETITION
- *1st place*, CHPC national round · *5th place*, ISC 2026, Hamburg. Optimised the benchmarks for our own hardware — OS, compilers and benchmark code.
- 2025 UCT micromouse
THIRD-YEAR DESIGN PROJECT
- Designed the power supply board, then coded the mouse to solve a maze autonomously.

SKILLS

LANGUAGES	Python, C/C++, Java, MATLAB, Julia, Bash, SQL · Linux, Git, Docker
HPC	CUDA, OpenMP, MPI, profiling, vectorisation, memory hierarchy, AI inference, orchestration
SIGNALS	FFT / spectral analysis, detection theory, digital filters, RF fundamentals, VITA49, NumPy / SciPy
HARDWARE	PCB design (KiCad), embedded systems, SolidWorks / Fusion 360, soldering
PEOPLE	Leading a team, mentoring, code review, technical writing

BEYOND THE DEGREE

- Over **200** hours of community service.
- Tutoring since school: set up and ran a programme with a children's organisation in Braamfontein, Johannesburg, and tutor privately in Cape Town.
- Drawing, painting and film photography; climbing and hiking. Some of it is at *tamrynosler.com*.