

# Kevin Nel

Electronic Engineer

Recent electronic engineering graduate with a passion for software development and a thirst for knowledge. Quick learner, always up for a challenge. Experience with C/C++, Python, Rust, and Linux, as well as experience with embedded systems. My broad interests in technology and foundation in engineering have helped me to develop a unique perspective and a valuable skill set for learning and problem-solving.



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## EDUCATION

### Beng Electronic Engineering University of Pretoria

Expected Graduation: 02/2024

Relevant Courses

- Final Year Project: Real time digital emulation of a vacuum tube guitar amplifier on an embedded Linux platform (C++).
- Control systems and Automation
- Stochastic Communication Systems.
- Digital Systems & Logic, Microprocessors, and Computer Architecture (FPGAs, VHDL).
- Digital Signal Processing with STM32 Platform (C).
- Analogue Electronics and Design.

## WORK EXPERIENCE

### Internship

IoT.nxt

01/2022 - 02/2022

[IoT.nxt](#) build IoT solutions that scale elegantly and solve real-world problems.

Achievements/Tasks

- Creation and updating of documentation for in-development and existing electronics products, demonstrating attention to detail and organization skills.
- Porting of a new micro-controller to RTOS software platform, showcasing technical acumen and problem-solving abilities.
- Gained experience in the functioning of an Agile project management environment, collaborating with cross-functional teams to achieve project goals.

### High School Mathematics Tutoring

Resolute Academy

2019 - 2021

[Resolute Academy](#) is committed to helping young students develop the skills and confidence they need to succeed in the digital age.

Achievements/Tasks

- Managed small classroom settings of up to 15 students, promoting an inclusive and conducive learning environment through effective leadership.
- Responsible for providing students with individualized assistance to aid them in their understanding of new concepts, demonstrating empathy and adaptability in tailoring teaching methods to suit individual needs.
- Conducted engaging presentations to explain mathematical concepts, showcasing effective communication skills.

### Internship

Willcom

12/2018

[Willcom](#) provides innovative network solutions for telecommunications.

Achievements/Tasks

- During my two-week internship, I gained practical insights into telecommunications, including exposure to Wireshark and Linux tools.

## SOFT SKILLS

Able to accept feedback, collaborate in team environments, communicate effectively, and think critically. Flexible, dependable and eager to learn.

## SKILLS

Programming

Python

C/C++

Rust

Linux

Git

Debugging

Problem Solving

Communication

Document Preparation

VSCoDe

Vim

Scripting/Automation

KiCAD PCB Software

3D CAD for FDM printing

## PERSONAL PROJECTS

### FilterForge

- [FilterForge](#) is a command line component value calculator for scaling and offset amplifier circuits and op amp low pass filters, using Texas Instruments application notes, written in Rust.

### ProKey 40+

- [ProKey 40+](#) is a tiny 40% ortho-linear mechanical keyboard PCB designed in KiCAD to use the Raspberry Pi Pico micro-controller

## SCHOOLING

### National Senior Certificate (Matric) (2016)

*Sutherland High school: Choice Subjects - Mathematics 80%, Physical Sciences 83%, Information Technology 89%, Engineering Graphics and Design 91%*

## ACHIEVEMENTS

### Honours in Leadership (2016)

*Holistic youth development initiative entailing a series of programs and activities aimed at developing leadership ability and personal growth.*

### Honours in Academics (2016)

*above 80% average for all 4 years leading up to matric*

### Prefect on the Student Executive Council (2016)

*Facilitated outreach programs to underprivileged communities, as well as performed other administrative prefect duties and events facilitation*

## INTERESTS

Linux

3D printing

Programming

Open Source

Music production

Guitar

Mechanical keyboards