

Kevin Nel

Electronic Engineer

As an electronic engineering student, I'm deeply engaged in technology, and constantly seeking challenges. My learning-driven days are balanced by playing guitar, building mechanical keyboards, and exploring Linux & new programming languages. My approach to problem-solving is to find the most straightforward and easy-to-understand solution. As Albert Einstein said: "If you can't explain it simply, you don't understand it well enough." With a blend of skills in software and embedded engineering, I'm an ideal fit for roles in low-level software.



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EDUCATION

Beng Electronic Engineering University of Pretoria

Expected Graduation: 12/2023

Relevant Courses

- Final Year Project: Real time digital emulation of a vacuum tube guitar amplifier on an embedded platform.
- Calculus 1, 2, & 3, Differential Equations, and Numerical Methods.
- Digital Systems & Logic, Microprocessors, and Computer Architecture.
- Digital Signal Processing in C with STM32 Platform.
- Stochastic Communication Systems.
- 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.
- Porting of a new micro-controller to RTOS software platform.
- Gained experience in the functioning of an Agile project management environment.

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

- Tutoring high school mathematics (grade 8 to grade 12) in a small classroom format (up to 15 students).
- Responsible for providing students with individualized assistance to aid them in their understanding of new concepts.
- Conducting presentations to explain concepts encompassing geometry, algebra, trigonometry, and functions to the entire class.

Internship Willcom

12/2018

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

Achievements/Tasks

- My 2 weeks internship was very informative into the inner-workings of telecommunications and network infrastructure on a large scale.

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

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%

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

Music production

Guitar

Mechanical keyboards

Open Source