



NISHEN PATHER

MECHATRONICS ENGINEER

As an engineer, I believe I can play an important role in solving complex problems that alleviate social and economic challenges. My personal motto is to believe in success through hard work and determination. This motto keeps me grounded and focused. I'm always very eager to take on as many opportunities as are afforded to me.

CONTACT

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PROFICIENCIES

Languages:

- Python
- C
- C++
- Java

Tools and Software:

- Simulink
- Matlab
- Keil Microvision
- Visual Studios
- Eclipse
- Git Extensions
- Microsoft SQL Server
- Jira
- Confluence

KNOWLEDGE AREAS

- DSP
- Control Systems
- Machine Learning
- Microcontroller Programming
- Embedded Systems
- CAN Bus
- Automation
- Serial Communication
- Teamwork
- Leadership
- Communication
- Report Writing
- Public Speaking

EDUCATION

BSc. Engineering Mechatronics

University of Cape Town

2017 - 2020

Graduated with 72.9% aggregate

- Courses: Embedded Systems, Digital Signal Processing, Advanced Control and Instrumentation and Mechatronics Design
- Final Year Thesis: " Automatic Differentiation for Large Scale Optimisation ". - received 71%
- Dean's Merit List Award 2017, 2018, 2019
- Graduated with honors

National Senior Certificate

Rondebosch Boys' High School

2012 - 2016

Graduated with 93% aggregate

WORK EXPERIENCE

Engineer in Training

MiX Telematics

2021-Present

International fleet and mobile asset management solutions (<https://www.mixtelematics.com>)

Tasks:

- Script development - developed and reviewed scripts which filter, interpret and manipulate CAN bus signals on vehicles and interact serially with 3rd party products. Scripts were written in a company proprietary assembler language and deployed globally
- Software development - created and upgraded software tools used within the company to automate engineering tasks (software applications written in C, C++ and python)
- Firmware engineering - exposure to the firmware deployed on the MiX hardware and coded test services under supervision of senior firmware engineers. Firmware developed in C and utilises CMSIS-RTOS API's

Intern: Mechatronics Engineer

Thingking

2018 - 2019

Thingking is a consultancy that builds interactive technology solutions (<https://www.thingking.co.za>)

Tasks:

- Involved in the designing and building of circuitry and embedded system solutions for various projects (utilised Arduino and Raspberry Pi products in solutions)
- Appointed lead mechatronics engineer in the design and creation of an interactive capacitive touch LED sign for the Jameson Whiskey company

Intern: Industrial Engineer

Zailab

2018

Zailab is a cloud-based contact center platform (<https://www.zailab.com>)

Tasks:

- Involved in the design process of various hardware products

EXTRA CURRICULARS

Weekly Fives Football Social League

2017 - Present

Western Province Cricket Club Member

2020 - Present

Kopano UCT Basketball Res League Captain

2017 - 2020