

Mitchell Phiri

MECHANICAL ENGINEER · PROGRAMMER

Avenue Francois Besson 19, c/o Liv Petek, Meyrin, Geneva, 1217, Switzerland

☎ (+41) 76 633 9487 | ✉ phirim93@gmail.com | 🏠 swissbeats93.github.io | 📷 swissbeats93 | 🌐 swissbeats93

“Every living being is an engine geared to the wheelwork of the universe. Though seemingly affected only by its immediate surrounding, the sphere of external influence extends to infinite distance.”

Education

University of Johannesburg

Johannesburg, South Africa

NATIONAL DIPLOMA IN MECHANICAL ENGINEERING

Feb. 2012 - Nov. 2012

- Did a Mechanical Engineering Diploma for one year due to space constraints on the Bachelor of Engineering Degree program

University of Johannesburg

Johannesburg, South Africa

BACHELOR'S DEGREE WITH HONOURS IN MECHANICAL ENGINEERING

Feb. 2013 - Nov. 2018

- Design Project: Design of a water filter for use in the Desalination Process
- Research Project: Computer simulation of Diamond as a resilient material in a high radiation environment

University of Johannesburg

Johannesburg, South Africa

MASTER OF PHILOSOPHY (MPhil) DEGREE IN MECHANICAL ENGINEERING

Jul. 2019 - Nov. 2020

- MPhil Thesis: Anomaly Detection in High Throughput Network Systems

Skills

Engineering Software

SolidWorks, ANSYS, Wolfram System Modeller, AutoCAD, Star CCM+, LAMMPS, Matlab, Mathematica, Material Studio, ReaxFF, VMD, Geant4

Analysis Tools

Root, SRIM, Selenium, AIDA64

Data Science & Machine Learning

Scikit-Learn, Python-Pandas, Seaborn, Matplotlib, Keras, OpenCV, Tensorflow

Programming

Python, C, C++, Matlab, Mathematica, LaTeX

Languages

English, Ndebele, Shona, Zulu

Work Experience

European Organisation for Nuclear Research (CERN)

Geneva, Switzerland

PROJECT ASSOCIATE WITH THE ATLAS TDAQ NETWORK ADMINISTRATION TEAM

Feb. 2019 - Apr. 2020

- Decommissioning of the old ATLAS Data Acquisition Network
- Installation and commissioning of the new ATLAS Data Acquisition Network
- Integration of the new network with Data Acquisition specific applications
- Development of tools for efficient monitoring of the high throughput network in real-time

RC Physics Group / University of Johannesburg

Johannesburg, South Africa

RESEARCH ASSISTANT

Mar. 2018 - Present

- Developing a web scraping API
- Developing a gender/ethnicity classifier employing Convolutional Neural Networks
- Developing an API for data analysis and augmentation
- Giving tutorials on Python, Data Science, Machine Learning and Deep Learning
- Supervising an AIMS Student's project in Machine Learning/Deep Learning

Honors & Awards

INTERNATIONAL

Apr. 2014 **Best First Year Student for Physical Sciences in Chemistry 2013**, Physical Sciences Prestige Evening

University of
Johannesburg,
South Africa

DOMESTIC

Sept 2010 **Best O'level Student 2009**, Prize Giving Day

*Gloag High School,
Zimbabwe*

Sept 2011 **Best Lower Six Sciences Student 2010**, Prize Giving Day

*Gloag High School,
Zimbabwe*

2012 **Best A'level Sciences Student 2011**, Prize Giving Day

*Gloag High School,
Zimbabwe*

MOOCs

Udemy

Online Education

STUDENT

Nov. 2018 - Present

- [Complete Python Bootcamp: Go from zero to hero](#) by Jose Portilla
- [Python for Data Science and Machine Learning](#) by Jose Portilla
- [Complete Guide to Tensorflow for Deep Learning with Python](#)
- Python 3: Deep Dive Series by Fred Baptiste
- The Complete Pandas Bootcamp: Master your Data by Alexander Hagmann
- Deep Learning: Advanced Computer Vision by Lazy Programmer

Udacity

Online Education

STUDENT

Apr. 2019 - Present

- C++ Nanodegree
- Data Engineering Nanodegree
- Data Structures and Algorithms
- Machine Learning Engineer Nanodegree
- Deep Learning Nanodegree

References

Professor Simon H Connell

Department of Mechanical Engineering Science
University of Johannesburg
Johannesburg, 2006

[Homepage](#)

✉ shconnell@uj.ac.za
+27 82 945 7508

Mikel Eukeni Pozo Astigarraga

ATLAS TDAQ Networking
European Organisation for Nuclear Research (CERN)
Esplanade des Particules, 1
CH-1211 Genève 23
✉ eukeni.pozo@cern.ch
+41 22 767 1224