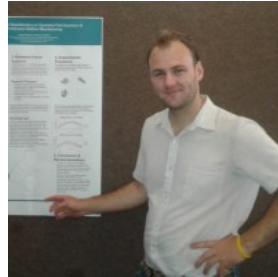


# Lemuel Haring CV

METALLURGIST / SOFTWARE DEVELOPER

☎ 064-974-8620 | ✉ lemuelharing@gmail.com | in lemuel-haring-15b8b89114lisru



## Personal Statement

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With an engineering and IT background, I help teams utilise software to solve current problems. Some examples being: automating lab testing procedures to reduce labour costs, feasibility study through data visualization, or creating a language based AI to extract sentiment from company social media pages.

Programming and machine learning are my favourite tools due to the accessible leverage. An idea can be conceived, simulated and thus tested out with minimal capital investment. Menial patterns can be automated providing users with more creative power, examples include CNC machining and object detection in satellite imagery. Additionally programming offers the utility to create systems where customers can add value to each other, thus becoming a more passive system generating income/resources.

I carry the distilled knowledge of all my previous mentors which I expand by learning from new mentors and sharing with other learners. In environments where shared knowledge improves the teams efficiency and impact employee satisfaction also improves.

## Education

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### Data Science with Python

UNIVERSITY OF CAPE TOWN

*Short Course*

2021

### Bachelor of Engineering: Metallurgical Engineering

UNIVERSITY OF PRETORIA

*Pretoria, Gauteng, South Africa*

2020

### Matric

LIGBRON – LIGBRON ACADEMY OF TECHNOLOGY

*Ermelo, Mpumalanga, South Africa*

2013

# Skills

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## Languages

- English, Afrikaans, German

## Engineering summary

- Mining(coal): Filter-press dewatering, Froth flotation, Process calculations
- Extraction(vanadium): Chemical lab testing, Product development, Sampling
- Consulting: Copper leaching R&D, Industrial and desktop extrusion 3D printers
- General labour: CNC lathe setter,

## Software Developer summary

- Python (ScraPy, Selenium, Sklearn, Keras, pandas, numpy)
- Latex (Typesetting), MS Office
- Creo Parametric (CAD)
- Apache NiFi, MySQL
- Web development, html, xhtml, CSS, Django
- Mathworks Matlab (basic proficiency)
- QGIS (basic proficiency)
- Linux experience (Ubuntu, Rasbian)
- IDE'S (VScode, Eclipse, ...)
- Sourcing data for data lakes through automated scripts
- Deploying Machine Learning algorithms(LSTM)
- Settings up and working with REST API's
- Apache NiFi data ETL
- [To see project portfolio click here](#)

# Experience

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## The Data Company

PYTHON PROGRAMMER

*Boksburg, Gauteng*

*February 2021 - October 2021*

- Development of machine learning systems from research through to production servers
- Data collection/scraping/API interfacing scripts to produce data lakes
- ML training management and optimizations for unique paths
- Deploying production code on production servers
- Writing software to be launched on Unix systems and Windows
- Fast machine learning deployments with transformers
- Fraud analysis systems (DataWalk)
- Stack: Python, MySQL, JavaEE(Maven, xhtml(Primefaces))
- Machine Learning stack: Python, TensorFlow, Keras, sklearn, flask

## FiltaQuip

PROCESS ANALYST (MINE SLURRY DEWATERING)

*Centurion, Gauteng*

*August 2020 - December 2020*

- Feasibility study on dewatering mechanics for production expansion
- Data collection, processing and process improvement using Matlab
- Pump and fluid flow mapping
- Contact Person:
  - Johan Bezuidenhout
  - johan.b@filtaquip.co.za
  - 082 785 0530

## Denel Dynamics

PROCESS ANALYST (ADDITIVE MANUFACTURING)

*Centurion, Gauteng*

*March - October 2019*

- 3D Printing operator and process investigations
- Determined dynamic printing tolerances based on design geometry and printing orientation.
- Tool designing for missile optics assembly
- Contact Person:
  - Cameron Wright
  - cameron.wright@deneldynamics.co.za
  - 0814111334

## Ex Mente

Pretoria Area, Gauteng

### STUDENT INTERN

Nov. 2017 - Jan. 2018

- Successfully development of a chemical reactor using python integrated CAD software(Salome) to allow for geometrical changes and 3D printer integration.
- Further development of a fully automatic experiment setup that regulated process parameters and reported data to a main data logger and controller (Raspberry Pi and Arduino)
- Contact Person:
  - Johan Zietzman
  - johanzietsman@ex-mente.co.za

## VANCHEM Vanadium Products (PTY) LTD

Witbank, Mpumalanga

### R&D LAB ASSISTANT

Nov. 2014 - Feb. 2015

- Research of a potential liquid vanadium product for export. Proof of concept was successfully completed and moved to product process design. The work consisted of wet chemical syntheses guided by researched electro chemistry and plant process knowledge
- Sample collection on leaching dams, kilns, ball mills and dump heaps

## Projects

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### Industrial 3D printing

- Determined the print accuracy of a Markforged printer
- Determined how part design influenced part print accuracy based on the geometries used and where they were used.

### Automated Experiments

- Integration of measurement equipment and pumps with a Arduino as micro controller and Raspberry pi as a logger to control an experiment. System is able to be changed to handle other experimental setups

### Vanadium Solutions

- Development of exportable vanadium solution that is manufactured in the current plant with the least capital investment for new equipment

## Personal Details

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### Hobbies

- Game modding Factorio (Bobs & Angels or Pyanodons)
- Following space exploration and advancements
- Guitar
- Tinkering with micro controllers (Arduino)
- Scrolling through Landsat and Sentinel 2 earth imagery
- Trying to get a career started in SpaceTech

### Information

- Name: Lemuel
- Surname: Haring
- Known as: Liam, Lemuel
- Gender: Male
- Race: White
- ID: 9501135013082
- Mobile: 064 974 8620