

# Dillon M. Parfitt

MECHANICAL ENGINEER · COMPUTER ENTHUSIAST

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"I want to put a ding in the universe." - Steve Jobs

## Education

### University of Pretoria

Pretoria, South Africa

B.ENG.(HONS) IN MECHANICAL ENGINEERING

Jan. 2013 - Dec. 2017

- Passed with distinction with a cumulative average of 75%
- Received Academic Honorary Colours from the Student Representative Council

### Penryn College

Mbombela, South Africa

GRADE 12

Jan. 2009 - Dec. 2012

- Independent Examination Board Matric Certificate with an average of 88.3%
- Awarded DUX Scholar at Penryn College for 2012

## Skills

**Personal** Leadership, Problem Solving, Vision

**CAD** Siemens NX, Siemens Solid Edge, Dassault Solid Works

**Simulation** Siemens Simcenter Pre/Post, Siemens Simcenter Motion, Tecnomatix Plant Simulation

**Programming** Python, Matlab, LaTeX

**PLM** Teamcenter

**Languages** English, Afrikaans

**Miscellaneous** Microsoft Office Suite, Smartsheet, Groupwise

## Experience

### Council for Scientific and Industrial Research (CSIR)

Pretoria, S.Africa

MECHANICAL ENGINEER

Feb. 2018 - PRESENT

- Implimentation of Industry 4.0 tools and software systems with a focus on Product Lifecycle Management through the use of Teamcenter.
- Mechanical Design and Simulation using Siemens NX and Simcenter 3D.
- Configuration of Virtual Reality Systems in NX.
- Optimization of Factory Floor through simulations in Technomatix Plant Simulation.
- Workshop experience with a laser cutter and water jet.
- Data analytics and GUI Design using Python.

### Honours Research, Turbine Design (Dr. Glen Snedden)

Pretoria, S.Africa

RESEARCHER

Jan. 2017 - Dec. 2017

- Researched the effect of Surface Roughness on the aerodynamic performance of turbine blades
- Assisted in developing a spreadsheet which designs the turbine blade profile and layout from the required performance.

### Undergraduate Research, Vibration Analysis of Turbine Blades(Mr. Francesca Pietra)

Pretoria, S.Africa

RESEARCHER

Jan. 2016 - Dec. 2016

- Researched the whether modal analysis is a feasible method in determining crack size and location within turbine blades.
- Developed a Matlab program to analyse the vibration in a turbine blade when tapped with a hammer in order to predict modal frequencies.

### Vacation Work, Council for Scientific and Industrial Research (CSIR)

Pretoria, S.Africa

STUDENT

7 Weeks: 2015 - 2017

- Developed an optimization program and graphical user interface in Python for the efficiency optimization of Jet Engines
- Designed a mechanism in which children with walking disabilities can be assisted by their parents.
- Converted a Compressor Application written in Fortran to Python

### Vacation Work, EWC Consulting Engineers

Mbombela, S.Africa

STUDENT

10 Weeks: 2014 - 2016

- Developed a Trommel Screen dimension calculator in python.
- Assisted in the structural design of a factory floor
- Assisted in the Maintenance of the Machinery in Malelane Sugar Mill

## Extracurricular Activity

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### Academic Committee at Mopanie Men's Residence

CHAIRMAN

Pretoria, S.Africa

Jan. 2014 - Dec. 2014

- Gained experience in leading a team of people with the academic activities in the residence.
- Obtained skills in planning and running events.
- Organized tutor sessions in which I assisted in tutoring

### Music

LEADER · SINGER · GUITARIST

Pretoria, S.Africa

Jan. 2010 - PRESENT

- Lead one of the music bands at Capital City Church International.
- Gained experience organizing sets of songs and leading the band in playing the songs effectively.
- Obtained experience singing, playing guitar and speaking in front of large groups of people.
- Gained management skills through the scheduling of people and arranging rehearsals.

### Church Youth

LEADER

Pretoria, S.Africa

Jan. 2010 - PRESENT

- Gained experience working with high school youth.
- Assisted in the planning and leading of Events, Camps and Outreaches.

### Community Service

MEMBER

S.Africa

Jan. 2010 - PRESENT

- Assisted in the construction, repair and painting of various rooms and classrooms at Hands at Work Orphanage.
- Repaired various buildings and facilities at the Bethlehem Township outside of Pretoria
- Took part in numerous church outreaches to poverty-stricken areas in South Africa, Swaziland and Mozambique.
- Repaired and cleaned various facilities at Second Chance Wildlife Rehabilitation Centre in Mbombela.
- Assisted in the repair of a childrens' playground in Pretoria.

## Honors & Awards

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### INTERNATIONAL

2014    **Membership**, Golden Key International Honour Society

Pretoria, S.Africa

### DOMESTIC

2017    **Honours with Distinction**, University of Pretoria

S.Africa

2017    **Top Performing Bursary Student**, Council for Scientific and Industrial Research

Pretoria, S.Africa

2013    **2nd Place in Academic Achievement**, Mopanie Men's Residence

Pretoria, S.Africa

2013    **6th Highest Academic Achiever**, First Year Mechanical Engineers, University of Pretoria

Pretoria, S.Africa

2012    **DUX Scholar**, Penryn College

Mbombela, S.Africa

2012    **8 Distinctions**, Grade 12

Mbombela, S.Africa

2011    **Finalist**, St. Mary's Battle of the Bands

JNB, S.Africa