

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

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

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