

# Dillon M. Parfitt

MECHANICAL ENGINEER · COMPUTER ENTHUSIAST

<No.>, <Street>, <Suburb>, Pretoria, 0083, Rep. of South Africa

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

## Education

### University of Pretoria

B.ENG.(HONS) IN MECHANICAL ENGINEERING

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

Pretoria, South Africa

Jan. 2013 - Dec. 2017

### Penryn College

GRADE 12

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

Mbombela, South Africa

Jan. 2009 - Dec. 2012

### Udemy

CERTIFICATE OF COMPLETION

- Completed: *The Complete Node.js Developer Course (2nd Edition)*
- Completed: *React 16 - The Complete Guide (incl. React Router 4 & Redux)*
- Completed: *Build Responsive Real World Websites with HTML5 and CSS3*

Online Courses

2018

## Skills

<b>Personal</b>	Leadership, Problem Solving, Vision
<b>Programming</b>	JavaScript, Python, Matlab, LaTeX
<b>Web Development</b>	Node.js, React.js, HTML5, CSS3
<b>CAD</b>	Siemens NX, Siemens Solid Edge, Dassault Solid Works
<b>Simulation</b>	Siemens Simcenter Pre/Post, Siemens Simcenter Motion, Tecnomatix Plant Simulation
<b>PLM</b>	Teamcenter
<b>Languages</b>	English, Afrikaans
<b>Miscellaneous</b>	Microsoft Office Suite, Smartsheet, Groupwise

## Experience

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

MECHANICAL ENGINEER

- Implementation 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 Tecnomatix Plant Simulation.
- Workshop experience with a laser cutter and water jet.
- Data analytics and GUI Design using Python.

Pretoria, S.Africa

Feb. 2018 - PRESENT

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

RESEARCHER

- 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.

Pretoria, S.Africa

Jan. 2017 - Dec. 2017

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

RESEARCHER

- 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.

Pretoria, S.Africa

Jan. 2016 - Dec. 2016

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

STUDENT

- 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

Pretoria, S.Africa

7 Weeks: 2015 - 2017

## 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

Pretoria, S.Africa

#### CHAIRMAN

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

Pretoria, S.Africa

#### LEADER · SINGER · GUITARIST

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

Pretoria, S.Africa

#### LEADER

Jan. 2010 - PRESENT

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

### Community Service

S.Africa

#### MEMBER

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