

Organized and ambitious mechanical engineer with a passion for design and advanced manufacturing. Seeking to use machine-element design and research skills to develop cutting-edge machinery and procedures. Designed and built a state-of-the-art mechanical polishing process and machine at the University of Cape Town in six months, saving 20% of the budget for manufacture. Convened a third-year mechanical engineering course of 120 students, educating on advanced and conventional manufacturing techniques.

Education

MSc in Mechanical Engineering (with Distinction)

2021 - 2022

University of Cape Town Overall Grade: 80% (A+)

BSc in Mechanical Engineering

2016 - 2020

University of Cape Town Overall Grade: 71.23% (A-)

Professional Experience

Lecturer

March 2022 - November 2022

University of Cape Town

- Convened, examined and prepared course content.
- Increased the overall course grade average by 10%.
- Managed and trained four tutors.

Graduate Engineer

March 2022 - Present

BMEC Technologies

- Assisted with professional mechanical designs.
- Developed a PDF report generator and associated widget.
- Learned PCB design through the use of CircuitStudio.
- Aided in assembling electro-mechanical controllers.

Production and Analyst Engineer

January 2019, June-July 2019

PVC Pipefit Engineering

- CAD modeling of existing PVC pipes/connectors and design of custom pipes.
- Production management, stock handling and database creation.
- Basic engineering analysis of pipes.

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Softwares and Packages

- **SOLIDWORKS**
- **MATLAB**
- DAQ (Dewesoft and LabVIEW)
- MS Office
- PTC MathCAD
- Python
- Flutter/Dart
- 3D Printing Slicer Softwares (Cura)
- CircuitStudio (base knowledge)

Relevant Skills

- Research
- Report and Academic Writing
- Process Modeling and Validation
- Experimental Design (DOE) and Experimentation
- Advanced Manufacturing Processes
- **Product and Component Design**
- Machine Design
- Contact Mechanics/Tribology
- **Component Sourcing**
- System Design
- **Project Management**
- Presentation
- **Professional Communication**

Journal Publications

IJAMT

August 2022

doi.org/10.1007/s00170-022-09863-0

JBSMSE

May 2022

doi.org/10.1007/s40430-022-03543-6

IJAMT

May 2021

doi.org/10.1007/s00170-021-07315-9

Extra Curricular

Football

UCT Football Team 2017 and 2018 **Software Development**

Self-taught Python and Dart/Flutter

Cooking

Chef/Assistant Manager Intern at Dim Sum restaurant for two months

References

A/Prof. Ramesh Kuppuswamy

Undergraduate and Postgraduate Supervisor | UCT ramesh.kuppuswamy@uct.ac.za

Dr. Reuben Govender

Colleague and Lecturer | UCT reuben.govender@uct.ac.za

Heidi Wilson

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