Quintin de Jongh
Mechanical Engineer

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Cape Town, South Africa

Dedicated, focused and self-driven Mechanical Engineer with a passion for mechanical design and implementation. My field of specialization is in the development of specialized machinery using research tools and process specific models. Inquisitive in nature and excited to learn, I possess a large array of skills that I am continually eager to expand upon. I enjoy working in cutting-edge environments and being involved in the instigation of new technologies.

Professional Experience

Mechanical Engineer
January 2023 - Present
Skeg Product Development
- Engineering lead and project manager for the successful development, testing and commissioning of a hydrogen reformer for fuel cell application.
- System and component design; CAD, FEA and CFD simulations; Automation and Control of Systems; Frontend Web Development.

Graduate Engineer
March 2022 - December 2022
BMEC Technologies
- Assisted with design and development of multiple mechatronic and mechanical products.
- Assembling electro-mechanical controllers used on industrial farms.

Lecturer, Teaching Assistant/Tutor
March 2022 - December 2022, February 2019 - May 2020
University of Cape Town
- Lectured, convened, examined and prepared content for the under-graduate manufacturing sciences course while managing four tutors.
- Tutored seven exit level engineering subjects over three semesters, assisting lecturers and students.

Education

MSc in Mechanical Engineering (with Distinction)
2021 - 2022
University of Cape Town
Thesis: "Flexible Media Polishing Machine Design, Development and Experimentation for the Polishing of Ti-6Al-4V Components"

BSc in Mechanical Engineering
2016 - 2020
University of Cape Town
Thesis: "Development of an Intelligent Grinding System"

Journal Publications

August 2022 - IJAMT (doi.org/10.1007/s00170-022-09863-0)
Spring-Dashpot Vibrational Model for the Investigation of Viscoelasticity in Gelatinous Abrasive Media and Subsequent Control of Parameters for the Blast Polishing of Ti-6Al-4V Alloy

May 2022 - JBSMSE (doi.org/10.1007/s40430-022-03543-6)
Polishing of a Selective Electron Beam Melting Processed Tungsten Carbide Punch through High Velocity Impinging of Flexible Media

May 2021 - IJAMT (doi.org/10.1007/s00170-021-07315-9)
A Study of Intelligent Grinding Systems with Industrial Perspective

Softwares and Packages

- SOLIDWORKS
- PTC Creo Parametric and Simulate
- MATLAB
- BECKHOFF TwinCAT (PLC and HMI)
- DAQ (Dewesoft, LabVIEW)
- Autodesk Simulation CFD
- HTML, CSS, JS
- Python
- Flutter/Dart
- 3D Printing Slicer Softwares (Cura)
- MS Office
- Firebase

Relevant Skills

- Product and Machine Design
- Machine Building
- Machine Control and Automation
- System Design
- Process Modeling and Validation
- Experimental Design and Implementation (DOE)
- Project Management
- Contact Mechanics/Tribology
- Report and Academic Writing
- Front-End Web Development

Extra Curricular

Exercise
- UCT Football Team
- Avid runner
- 5-a-side football (since 2018)

Software Development
- Intermediate Python (essentials, OOP, data structures and algorithms)
- Development of Flutter and Front-End Web Applications/Interfaces

Culinary
- Two month internship as a Chef and Assistant Manager at a top Dim Sum restaurant in Cape Town

Languages

- English (Native)
- Afrikaans (Conversational)

References

Fabio de Odorico
Colleague | Mechatronic Engineer | Skeg
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Heidi Wilson
Project Director | BMEC
heidi@bmec.co

Dr. Reuben Govender
Colleague and Lecturer | UCT
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