John Maree

Electrical Engineer (MSc, BSc)

Citizenship:	South African
Address:	Johannesburg, South Africa
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Driver's License:	Yes

Work History

Oct 2023 – Present

Lead Electrical Engineer – Microgrid and Controls
ENERGENIC AE (PTY) LTD. Johannesburg, South Africa.

Working as an electrical engineer on renewable energy projects from project inception through to implementation, with a specialization in control system coordination and programming of complex hybrid micro-grids involving solar, BESS (EPC Power, ATESS, etc) and generator resources. Deeply involved in grid-compliance, product and solution R&D as well as client and vendor relationship management.

Apr 2021 - Present

Co-Founder
DISPLODE (PTY) LTD. Johannesburg, South Africa.

Founded a venture during university to produce a low-cost orienteering timing system from scratch. Engineered a complete solution featuring custom STM32/NFC hardware with injection-molded housing and a cross-platform ElectronJS application. The system is currently deployed across two provinces, serving over 500 students.

Skills: Embedded Systems · Printed Circuit Board (PCB) Design · Start-up Leadership · Budgeting · Hardware · Project Management · Software

Sep 2020 – Dec 2022

Full Stack Software Engineer
ASPTORY (PTY) LTD.   Johannesburg, South Africa.

Responsible for building both PWA and cross platform mobile applications based on web-technologies. The technology stack involved Microsoft SQL for databases, .NET Core & .NET Framework for backends with a typescript frontend built from ionic libraries. Ionic Capacitor and Cordova were used for mobile development. During my employment, I was lead developer on the Apple Watch application for the ActiFinder app built exclusively in SwiftUI.

Skills: Solution Architecture · Full-Stack Development · Software Development · Project Management · Agile Methodologies

Jan 2019 – Feb 2019

Intern (Electrical Engineer)
Marthinusen & Coutts.   Johannesburg, South Africa.

Primary project assigned was to design and build a milliohm meter from scratch to measure the resistance of field windings in large motors. The task was completed using a combination of Arduino hardware, 16-bit ADC and a 100A current shunt. Estimates placed the tool built within 10% of the commercially available options.

Skills: Embedded Systems · Printed Circuit Board (PCB) Design · Hardware · Electrical Engineering · Project Management

| Dec 2018 – Jan 2019 | **Intern (Electrical Engineering)**
Tenova Pyromet. Johannesburg, South Africa.

General administration and excel calculations involving high-current DC arc furnaces. |
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Education and Professional Associations

| July 2025 – Present | **Candidate Engineer (ECSA) Electrical Engineering**
ECSA, Johannesburg, South Africa.

Professional Association. Planned PR Eng submission in coming years. |
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| Jan 2021 – Dec 2023 | **MSc Electrical Engineering**
University of the Witwatersrand. Johannesburg, South Africa.

Title: Characterizing high-speed effects arising from distributed component substitutions for reactive components in a DC-DC buck converter.

Grade: 81%

Notable Achievements:
- 2022 Postgraduate Scholarship
- 2021 Post-graduate Scholarship |
| Jan 2017 – Dec 2020 | **BSc Electrical Engineering**
University of the Witwatersrand. Johannesburg, South Africa.

Degree comprises of 3 years of undergraduate study with the 4th year comprising of an Honors project.
Across all 4 years of study a GPA of 70% was achieved. Final year GPA was 84%.

Notable Achievements:
- 2020 Adolph Goldsmith Memorial Prize
- 2020 Google Hashcode – 4th in South Africa
- 2019 Entelect University Coding Competition – 4th in South Africa
- 2019 Certificate of merit in Electrical Engineering Design
- 2019 CSIR Student High Performance Computing Competition – 4th in South Africa
- 2018 Golden Key Society Admission (awarded to the top 15% students)
- 2017 University Entrance Scholarship |
| Dec 2016 | **High School Qualification (secondary education)**
De la Salle Holy Cross College. Johannesburg, South Africa

Secondary education was completed under the IEB certification. 5 distinctions were achieved, meaning 80%+ average in 5 subjects. |

References

Nicholas Leighton
- Head of Product and Sales
- EnergenicAE (pty) ltd, South Africa
- nicholas@energenicae.co.za

Nicholas Reuss
- Senior Full Stack Software Engineer
- Telio, Johannesburg, South Africa
- Co-founder of Displode
- reuss.nic@gmail.com

Byron Hull
- Principal Design Engineer
- Energenic AE pty (ltd)
- byron@energenic.co.za

Hein Ungerer
- Project Engineer: Microgrid & BESS
- SolarEff (July 2025), FreedomWon
- Heinungerer18@gmail.com