

MUSA WENKOSI DUBE
Electronics and Nanotechnology Engineer

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SUMMARY

Highly motivated and detail-oriented Electronics and Nanotechnology Engineer with a Master's degree and hands-on experience in designing, developing, and testing advanced electronic and nanotechnological systems. Skilled in microfabrication techniques, semiconductor device physics, x-ray, plasma, and vacuum electronics. Proficient in leveraging cutting-edge technologies to tackle complex engineering challenges. Strong team player with excellent analytical, problem-solving, and communication skills. Seeking to contribute to innovative projects in electronics, renewable energy, and nanotechnology.

EDUCATION

Saint Petersburg Electrotechnical University, Russia

Master of Science (MSc) in Electronics and Nanotechnology Engineering (09/2022 - 09/2024)

- Specialization: Renewable Solar Energy
- **Dissertation:** *"Computer Simulation of Wireless Power Transmission Systems Using Lasers and Solar Cells"*

Bachelor of Science (BSc) in Electronics and Nanotechnology Engineering (09/2018 - 09/2022)

- Specialization: Electronic Devices and Applications
- **Dissertation:** *"Software Package for Modelling X-ray Image Parameters"*

Sizane High School, Bulawayo, Zimbabwe

- **A-Level:** 4 As
 - **O-Level:** 8 As, 2 Bs, 1 Distinction
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EXPERIENCE

Svetlana X-Ray, Saint Petersburg, Russia

Electronics Engineer Intern (06/2021 - 09/2021)

- Designed electronic components using **KOMPAS 3D**.
- Developed and produced **x-ray tubes** for various applications.
- Participated in regular training sessions to stay current with industry advancements.
- Documented and refined **engineering procedures and processes**.

EFSOL Russia, Saint Petersburg, Russia

Control Systems Engineer (07/2023 - 01/2024)

- Designed **user-friendly interfaces** for control systems, improving efficiency.
- Developed **custom control solutions**, increasing customer satisfaction.
- Enhanced **system reliability** through regular maintenance and troubleshooting.
- Worked on **complex engineering problems**, balancing multiple technical constraints.

Easy Code, Saint Petersburg, Russia

English & Computer Programming Teacher (02/2023 - 02/2025)

- Utilized **interactive teaching methods** to enhance student engagement.
- Implemented **data-driven instruction** to improve academic performance.
- Developed a **flashcard web application** tailored for educational lessons.

Chicaga, Saint Petersburg, Russia

English & Computer Programming Teacher (02/2024 - 02/2025)

TECHNICAL SKILLS

Programming & Software Development:

- **Languages:** Python, C, C++, Java, JavaScript, HTML, CSS, VHDL, Node.js, Next.js, Django
- **Tools & Frameworks:** Arduino, COMSOL Multiphysics, Git, Linux, LT Spice, MATLAB and Simulink, MongoDB, PostgreSQL, React, Kompas 3d, AutoCAD, PSpice, Docker, CODESYS, STM32cube, LabVIEW,

Electronics & Engineering:

- Circuit Design & Analysis
 - Embedded Systems & Arduino ARM Programming, Programmable logical controllers
 - Nanofabrication Techniques & Semiconductor Technologies
 - Metrology & X-Ray Technology
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PROJECTS & COURSEWORK

- **Calculation of Effective Border "The Depletion Region-Channel" in the MESFET** (*1st Semester, MSc*)
- **Feasibility Study of a Renewable Energy Hybrid System Based on Photovoltaics** (*3rd Semester, MSc*)
- **Thermodynamic Analysis of Semiconductor Compound Synthesis** (*5th Semester, BSc*)
- **Propagation Laws of Electromagnetic Waves in Guided Systems** (*5th Semester, BSc*)
- **Calculation of Solid-State Electronic Devices Parameters** (*6th Semester, BSc*)

- **Microwave Diode Mixer Design** (*7th Semester, BSc*)
 - **Design of Electronic Devices** (*7th Semester, BSc*)
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CERTIFICATIONS & TRAINING

- **Training Practice (4th Semester, BSc)** - Excellent
 - **Field Experience (6th Semester, BSc)** - Excellent
 - **Pre-Diploma Practical Training (8th Semester, BSc)** - Excellent
 - **Academic Internship (1st Semester, MSc)** - Excellent
 - **Internship (Research Project, MSc, 2nd-4th Semester)** – Excellent
 - **Computer Vision (Academic programme):** Hard and soft
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LANGUAGES

- **English** (Native)
 - **Ndebele** (Native)
 - **Zulu** (Native)
 - **Russian** (Advanced)
 - **Shona** (Advanced)
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EXTRACURRICULAR & VOLUNTEERING

- Developed **software solutions** for educational and engineering applications.
 - Passionate about **renewable energy research** and **scientific innovation**.
 - Active participant in **international engineering conferences**.
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