



# BOPHILO CHARLES NTSEMI

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🌐 [WebPage-portfolio](#)

## Education

University of the Witwatersrand, , Johannesburg, RSA – Incomplete (FinalYear)

NFQ level 8 - Bachelor of Science in Electrical Engineering

- *Majors:* Software Development, Cloud Computing in Data Science, High-Voltage Engineering, Power Systems, Electronics, Project Management Engineering Design and Prototyping

Tshimbupfe Secondary School - Completed (2017)

Matric/NSC - Grade 12

- *Majors:* Mathematics, Physical Sciences, Geography and Life Sciences

## Technical Skills

**Programming :** Python3, JavaScript(ES6), C++, HTML5, CSS3, SQL, Assembly, Git, Powershell, Windows Cmd, VS Code, LaTeX

**Web Technologies :** IBM, deploying Apps on Azure, Agile SDLC, CI/CD, Scrum, GitHub, WebSockets,

**Design Tools :** Figma, Adobe, Flutter, Jira,

**Front End :** knowledge of Developing with front-end development languages and tools such as HTML5, CSS3, JavaScript(ES6+), React and Bootstrap

**Back End :** basic skilled with Programming applications using back-end languages and frameworks: Express, Node.js, Python3, and Django

**Engineering :** LTSpice, MATLAB, FEMM, Oscilloscope, PLC Arduino Programming,

**Technologies/Frameworks :** Docker, Kubernetes, GitHub Actions, Windows OS Linux, Ubuntu,

**Computer :** basic skills of working with MS Word, Excel, PowerPoint, Access, Outlook, Visio, Project, Jira,

## Experience

Hlogirati (Ltd) Pty Consulting and Training Services - Electrical Engineer Intern, (Nov, 2022 - Feb, 2023)

- **Health and Safety practices:** Trained in hazard identification, risk assessment, and safety protocols
- **Technical Projects and Engineering Tasks:** Collaborated with fellow engineering interns to design network systems, select transformer sizes, perform three-phase network analysis, and conduct fault level calculations for residential power distribution projects.
- **Technical Installations and Maintenance:** Assisted technicians in installing industrial motors, air conditioning systems, switchgear components, and programmable remote controls.

CZ Electronics (Pty) Ltd - Junior Engineering Technician (Oct 2019 – March 2020)

- **Technical Support and Production Tasks:** Included and not limited to - Providing clerical and technical support to senior engineers by troubleshooting manufacturing systems, testing equipment, editing technical documents, record and update production statistics.
- **Inspection, Testing, and Maintenance:** Testing and diagnosing faults for DSTV and Smart TV end product units, interpreted PCB diagrams, soldered faulty components, and collaborating with senior engineer to configure hardware/software for production and testing equipment.
- **Health and Safety Compliance:** conducted routine inspections of tools and equipment, and participated in meetings to address technical issues and implement corrective actions for production challenges.

## Training and Competency Courses

IBM - Full Stack Software, (Feb, 2024 - July, 2024)

certificate

- Learning to build cloud native applications using Docker, Kubernetes, OpenShift, and Istio.
- Using Django ORM to build object-oriented RDMS using IBM Db2, and compose SQL queries to insert, select, update, and delete data
- Creating, and deploying microservices applications using Docker containers and serverless technology IBM Code Engine.
- Learn creating REST API endpoints and invoke them using cURL and Postman; Use SwaggerUI to document and test APIs.
- learning to create and deploy AI-based applications onto a web server using IBM Watson AI Libraries and Flask.
- Creating Python modules, run unit tests, and package applications while ensuring the PEP8 coding best practices using Pylint.
- Creating server-side applications using Node.js and Express frameworks.
- learning to develop interactive user interfaces (UIs) and web applications using JavaScript technologies including React, JSX, and ES6.

Artificial Intelligence Augmented Professional Development Skills, (Feb, 2024 - July, 2024)

certificate

- Learn to use AI tools like Adobe and Runaway to design presentations, generate graphics, and enhance engagement through creative solutions
- **Computer Proficiency:** learn intermediate skills in Excel, Outlook, PowerPoint, and managing emails effectively.
- learn about leveraging AI to streamline workflows, improve collaboration, and automate routine tasks.
- learn about enhancing collaboration and leadership skills through AI-assisted project management and team coordination

## References

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