

MR. FISOKUHLE GOODWILL THEMBELANI THUSINI

✉ info@fisokuhlethusini.com

🌐 www.fisokuhlethusini.com

📍 Johannesburg, Gauteng, South Africa

PROFESSIONAL SUMMARY

A consistent problem solver, bringing change as a **Data Scientist** with experience across different fields and industries. Always hands-on experimenting with different technologies, that coupled with the growing knowledge gained continue to improve the role played to shape safe technology adoption in the ever changing **data, electronics, and software engineering** industries. Always prepared to put the knowledge gained and abilities into practice to deliver the best results in all projects and continue to learn. A pioneering, self-motivated, and goal-oriented professional with a strong drive for success. Passionate about empowering others by sharing knowledge and leveraging experience to create meaningful impact. Giving back to the community and always striving for continuous improvement.

SKILLS

- **Programming & Software Development:**
 - Python, C++, C#, C, PHP, SQL, HTML
 - Git, Docker, ECS
- **Data Science and Machine Learning:**
 - Data Analysis
 - Prompt Engineering and RAG
 - Deep Learning
 - NLP
 - Feature Engineering and Model Deployment
- **Cloud:**
 - AWS
 - GCP
- **Software Engineering & System Design:**
 - Object-Oriented Programming (OOP)
 - API Development
 - CI/CD, DevOps, MLOps
 - Infrastructure as Code (IaC)

CORE COMPETENCIES

- **Advanced Microsoft Office** – Microsoft Word, PowerPoint, Excel.
- **Budget Control & Resource Management** – Experienced in cost analysis and optimisation, and resource management.
- **Quality Control & Information Management** – High levels of accuracy by keeping attention to detail and correctness. Detailed documentation and information examination to produce quality outputs.
- **Communication & Leadership** – A thought leader, embracing change and able to articulate information to different stakeholders. A team leader, with a firm belief that people are the greatest asset.
- **Fault Finding** – Constant system analysis, trouble shooting and stress testing.

EDUCATION

Institution : University of Johannesburg
Qualification : BEng Tech Honours in Electrical Engineering
Status : **Completed with distinction (2021)**

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Qualification : BEng Tech in Electrical Engineering
Status : **Completed (2018 – 2020)**

WORK EXPERIENCE

Discovery Limited – Sandton, Gauteng – Nov 2022 - Present

Data Scientist (Specialist) – July 2024 - Present

- **Design & deploy** scalable system solutions, the engine of Vitality Drive, able to handle and process millions of driving trips daily in near real-time.
- **Optimise** data collection and existing processing queries to improve data retrieval and allow for data analysis without affecting data processing.
- **Develop** internal AI solutions to integrate with existing systems to **reduce** cost and **improve** productivity.
- **Lead** multiple local and international Vitality Drive projects from design to implementation.
- **Manage** both server-based and server-less workflows with constant improvement and revisions to keep all systems and resources fit for purpose.
- **Mentor** junior and graduate team members, improving team efficiency and knowledge sharing.

Data Scientist (Associate Specialist) – Nov 2022 – June 2024

- **Developed and deployed** a new Vitality Drive scoring model VD3, updating the Vitality Drive program to provide even more value to clients.
- **Optimised** existing queries and processes to improve performance and system scalability.
- **Improved** data visualisation on AWS QuickSight and Streamlit to provide useful insights to all stakeholders.
- **Improved** existing logs and metrics to better monitor our application and resources on AWS to make debugging easier.
- **Managed** both server-based and server-less workflows with constant improvement and revisions to keep all systems and resources fit for purpose.

DriveRisk (Pty) Ltd – Benoni, Gauteng – Feb 2022 – Oct 2022

Development Engineer – Feb 2022 – Oct 2022

- **Designed** Automatic Test Equipment (ATE).
- **Designed** various Core Product Enhancement – i.e., Trigger PCB using ALTIUM and C/C++
- **Created** programs for various Engineering Functions using LAB View or Visual Basic.
- **Developed** testing and labels applications using Python Tkinter UI.

- **Management** and **Data** storage with ProgreSQL and AWS RDS and EC2.
- **Assisted** with High Level fault finding, Analog and Digital electronic design, PCB Design and Layout and Technical reading. Also with training of engineering technicians.
- **Designed** Software and Firmware solutions.

Valenture Institute – Cape Town, Western Cape – Oct 2021 – Feb 2022

Learning Design Intern – Oct 2021 – Feb 2022

- **Responsible** for the transfer of educational content from existing content templates to revised content templates.
- **Worked** with Learning Designers for different subjects to ensure the content has been transferred and translated correctly.
- **Performed** auxiliary tasks, including, but not limited to briefing in graphics, and tracking the use of external assets.
- **Worked** with subject Learning Designers and Learning Technologists to send, upload and quality assure developed content on the learning management system.
- **Conducted** accessibility checks on content that has been developed.
- **Assisted** Learning Designers with content research.
- **Worked** with project management and various operational stakeholders to ensure that deadlines are adhered to and that project communication takes place in a timely and effective manner.

PROJECTS

FGT Chat LLMs – A Streamlit app that is a continuation of the FGT Chat app where the GPT-3.5 model is used alongside the Llama2-7b model to showcase the capabilities of the models and the benefits that each provide, where a user pays for what they use in the GPT-3.5 model, reducing costs and they can have the Llam2-7b model self hosted, providing better security.

FGT Workout – An iOS app developed using iOS features including computer vision for personalised workouts, where you can see the percentage of your workout compared to how the workout is commonly done. There are also features that connect to the Apple Watch where a person can view their different health metrics such a steps and their average heart rate, as well as being able to to schedule workouts on the app.

FGT Chat – A Progressive Web Application created for collaborative learning, with options to work in groups and take advantage of using Large Language Models (LLMs) such as the GPT-3.5 model to improve and share knowledge using private documents hosted in a private Pinecone vector database. The second part of the project includes and ChatGPT plugin so that users with GPT Plus subscription can choose between using the ChatGPT or the FGT Chat PWA to interact with the model.

AQI Dashboard – A data science web application that uses air quality data from the OpenAQ API to display pollutants in different locations, analysing air quality trends around the world and identifying gaps in air quality reporting. This is a continuation of my Honours degree research where the goal was for every person to know and understand the quality of the air they breathe so that they can make informed decisions on taking better care of our planet.

Book Club System – A website created using PHP with the Google Books API that provides an opportunity to book lovers and students to search for books in Google Books, get previews and be provided with options on where to buy these books. Using MySQL, the users can then be able to interact with each other in a discussion board to be able to share books or discuss specific books that they are currently reading.

Chat and File Share Web App – A web app developed with React Js, Node Js, and Google Firebase. The web app uses Firebase authentication to log in using email or with a Google account, then the chats are stored in the Firebase database which is a NoSQL database, with the files shared stored in the Firebase storage and those files can be shared and viewed in the web app.

Stock and Staff Management Web App – A web app developed using Python Flask, HTML, and CSS used to manage stock and staff with different access to the system. The application is designed with a user friendly UI, using PostgreSQL to manage and store the data. With the AWS EC2 instance used to host the web application.

Machine Learning Stock Trend Prediction Web App – A web app developed with Streamlit that displays original stock trends compared to predicted stock trends that have been predicted by a model trained using the LSTM (Long Short Term Memory) neural network to learn long term dependencies.

AI Computer Vision – Prevention is better than cure, a computer vision project developed using OpenCV, CVZone and Pyserial to detect construction Hard Hats and Eyeware for better safety ensuring safety in the workplace. With voice prompts, Arduino outputs, and video recording when the Hard Hat is off. Planned expansions of create a UI for better management of the system.

ADDITIONAL INFORMATION

- **Badges:**
 - AWS Solutions Architect (Associate) 🏆
 - AWS Cloud Practitioner 🏆
- **Awards and Certificates:**
 - Most Innovative (Presented) Project (Honours degree)
 - Entrepreneurship: From Idea to Action course completion with the best business idea and pitch
- **Organisations:**
 - Youth Capital Influencer
- **Volunteer work:**
 - Started a small initiative in 2018 to give back to my community by providing information and tutoring grade 12 learners in my former high school.
 - Assisting first year students entering university to adapt and settle in university.
- **Goals:**
 - To create affordable projects for small businesses in the data, electronics, and software aspects.
 - To invent locally produced products and empower more young people to innovate.