

## SKILLS

**Technical Tools** Python (PyTorch, Tensorflow, matplotlib, scikit-learn, pandas), MATLAB, SQL, Git, LaTeX, C++

**Quantitative Research** Mathematical modelling, engineering design, data analytics

**Communication** Technical writing, data visualization, public speaking, presentation

## EDUCATION

**Imperial College London, London, United Kingdom** 2022-2023

**Master of Research in Bioengineering** (*Top student*)

Thesis: Embroidered Electronic Interfacing for Health Monitoring

**University of the Witwatersrand, Johannesburg, South Africa**

**Bachelor of Engineering in Information and Electrical Engineering** (*Top 3 students*) 2020-2021

Thesis: The Impact of Acoustic Features on the Persuasiveness of COVID-19 Lifestyle Speeches: Spectral and Cepstral Features

**Bachelor of Engineering Science in Biomedical Engineering** (*Top student*) 2016-2018

Thesis: The Design and Implementation of a Low-Cost Hearing Aid

## WORK EXPERIENCE

**Güder Research Group, Imperial College London, United Kingdom | Research Engineer** July 2024 — Present

- Assisting in the experimental design and execution of sensor pipeline projects within the Güder Research Group. This has involved assisting with **lateral flow assay integration with electronics** and the **construction of an AI model to classify leaf samples as diseased** based on virus load sensed from electrochemical results and photographs of the leaf.

**NannyML, Belgium (Remote Position) | Data Science Writer** May 2024 — Aug 2024

- Wrote for the post-deployment data science blog detailing innovation within the NannyML open-source and cloud product library. This involves **generating models, running experiments and finding creative ways to communicate these results** in visual and written form.

**Think3dots Consulting, Johannesburg, South Africa | Solution Engineer** Feb 2022 — Sep 2022

- Led the **rebasin, data engineering, and statistical analysis** of a model to predict the number of doctors needed at different clinics for a large multiregional medical consult intermediary in South Africa.
- Developed a high-level **systems overview and backend design** of a hospital blood tests software platform with outputs used in the creation of a pitch deck for investors.
- Researched current **AI in healthcare innovations** and constructed the outline of the Investec Talk Series given by Dr Adam Pantanowitz entitled *Medicine In Conversation: A[I] Healthcare Revolution*.

**Aerobotics, Cape Town, South Africa | Student Intern** Jan 2021 — Feb 2021

- Researched the incorporation of **computer vision** into drones for autonomous descent. This project made use of **OpenCV, image processing techniques, and Python analytics** to accompany my project feasibility assessment.

## OUTREACH & LEADERSHIP

**SisonkeBiotik, Remote, South Africa | Member** Feb 2024 — Present

- Active writer and paper reviewer for a MICAAl 2024 workshop paper (medical imaging biobank for Africa) and **workshop organiser, facilitator and presenter for the Deep Learning Indaba 2024**

**1MillionGirlsInSTEM Ambassador, Johannesburg, South Africa | Mentor, Volunteer, Organiser** Feb 2022 — Sep 2023

- Mentored girls from underprivileged backgrounds by answering questions, providing advice, and linking girls with STEM-based educational resources and contacts.
- Organised and led a biomedical engineering-based workshop** for 30 girls which entailed finding sponsorship, developing biomedical workshop content, liaising with additional volunteers, and preparing my presentation material.

## SUMMER SCHOOLS & PERSONAL DEVELOPMENT

### [Deep Learning Indaba, Dakar, Senegal](#)

Sep 2024

Machine learning governance and low-resourced language approaches and **co-ran the Data Science for Health Workshop**

### [McKinsey University Scholar, Remote, South Africa](#)

Sep 2021 – Dec 2021

*Strategies for **effective communication, quantitative analysis, and project management skills***

### [IBRO-Simons Computational Neuroscience Imbizo, Muizenberg, South Africa](#)

Jan 2020

*Theoretical and practical concepts in cellular neuroscience, **machine learning, decision-making, and reinforcement learning***

## PUBLICATIONS

**T. Weinstein**, X. Li, J. Flauzino, A. Muhammed, L. Gonzalez-Macia, M. Yüce, H. Kurt, F. Güder, '[Conductive Cotton Threads for Scalable Seamless Integration of Biomedical Sensors in Wearable E-Textiles](#)', [Manuscript in preparation]. Department of Bioengineering, Imperial College London.

L. Ismaila, H. Turki, M. Frikha, **T. Weinstein**, F. Hunja, C. Fourie, and S. Adeshina, '[AfriBiobank: Empowering Africa's Medical Imaging Research and Practice Through Data Sharing and Governance](#)'. In: Anazodo, U., *et al.* Medical Information Computing. MImA EMERGE 2024 2024. Communications in Computer and Information Science, vol 2240. Springer, Cham. [https://doi.org/10.1007/978-3-031-79103-1\\_20](https://doi.org/10.1007/978-3-031-79103-1_20)

V. Aharonson, C. Karpasitis, **T. Weinstein**, and G. Koral, '[Netnography of Social Media Addresses on COVID-19](#)', *Eur. Conf. Soc. Media*, vol. 9, no. 1, Art. no. 1, Apr. 2022, doi: 10.34190/ecsm.9.1.299.

## SELECTED AWARDS

### [Top Student in MRes for Bioengineering, Imperial College London](#)

2023

### [Skye Foundation Scholarship, Skye Foundation](#)

2022

*Awarded to exceptional South Africans pursuing postgraduate degrees, nominated through their university faculty deans.*

### [Isazi Consulting Prize, University of the Witwatersrand](#)

2021

*Awarded to the top 5 information engineering graduates awarded an average of above 70% in their final year.*

### [Entelect Software Development Prize, University of the Witwatersrand](#)

2020

*Awarded to the second-best 3<sup>rd</sup> year of electrical engineering software development course.*

### [Colin G. Caro Award, University of the Witwatersrand](#)

2018

*Awarded to the top biomedical engineering student.*

### [Dean's List, University of the Witwatersrand](#)

2016 - 2018

### [SA Breweries Award, University of the Witwatersrand](#)

2016

*Awarded to the top student in Introductory Life Sciences in the entire Science cohort.*