Gerald van Eeden

Product | Bioinformatics | Data Analysis

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About Me

I'm an experienced technology entrepreneur and product manager with a strong background in data analysis and a PhD in Bioinformatics. I've worked with banks, retailers, and consumer brands to build innovative retail products that drive customer retention and generate ancillary revenue. At K42, I led the development and scaling of our commerce platform from concept to deployment across more than 10,000 countertops, and successfully turned experimental payment solutions into mature, revenue-generating products. I have hands-on experience in software development using React Native, JavaScript, and Clojure, and am proficient in SQL, R, and Python. My work has involved statistical modeling, A/B testing, building analytics dashboards, UI/UX design in Figma and data pipelines, and using tools like Mixpanel to analyse event data and inform product decisions.

Experience

Founder and Product Lead
K42
August 2021 - Present
London, England, United Kingdom

Directed the end-to-end product management for a novel retail commerce platform, delivering a vertically integrated suite of products and tools designed to boost sales, enhance efficiency, and influence consumer behaviour. Key responsibilities include:

- **Product Management & Strategy:** Led market research and user feedback initiatives to define a clear product vision and roadmap aligned with business objectives.
- **Leadership:** Worked closely with engineering, design, and customer success teams to translate business requirements into detailed product specifications. Successfully scaled platform availability from 0 to over 10,000 countertops.
- **Client Engagement:** Partnered with enterprise clients to capture in-depth user needs and validate product concepts. Developed proof-of-concept solutions that showcased tangible business value.
- **Data-Driven Decision Making:** Implemented robust analytics frameworks to monitor key performance metrics. Leveraged data insights to continuously refine product features, optimise user experiences, and drive strategic improvements.

Founder and Managing Partner
Kepler16
November 2018 - Present
London, England, United Kingdom

Kepler 16 is a deep tech venture studio & global network of business, financing and technology partners, building systems to scale the next generation of transformative technology companies. Key responsibilities include:

- **Product and Software Development:** Designed and built tools and prototypes to support the growth and innovation of multiple ventures, ensuring technical scalability and alignment with market needs. Clojure, Javascript, React Native.
- **Operational Leadership:** Oversaw all consulting projects, managing cross-functional teams, and handling the studio's administrative, financial, and operational processes to drive efficiency and growth.
- **Strategic Vision:** Identified high-potential technologies and partnered with innovators to develop viable business models, securing funding and resources to accelerate venture success.

Bioinformatics PhD Student

Stellenbosch University
February 2018 - December 2021
Stellenbosch, South Africa

Thesis: Expanding Existing Tools to Aid in the Epidemiological Study of Populations with Complex Ancestry

This work provided a comprehensive framework for inferring and utilising recombination maps in underrepresented populations, contributing to the global effort of reducing the disparity between individuals of European and non-European descent in GWAS research. I gained experience in:

- **Bioinformatics Pipelines:** Designed and optimised bioinformatics workflows using Nextflow and Snakemake, ensuring reproducibility and scalability. Containerised applications with Docker and Singularity to enhance cross-platform portability and computational efficiency.
- **HPC Orchestration:** Configured and managed bare-metal HPC clusters for large-scale genomic analysis, using Terraform for infrastructure provisioning and Kubernetes for workload orchestration. Integrated cloud-based solutions on Google Cloud Platform (GCP) to scale computations dynamically.
- **Local Ancestry Inference:** Implemented and extended computational methods for local ancestry inference, enabling fine-scale genetic mapping in diverse populations. Applied statistical and machine learning models to enhance inference accuracy.
- **Data Analysis & Scripting:** Conducted large-scale genetic and epidemiological data analysis using R, Python, Bash, and Unix tools. Developed automation scripts for data preprocessing, variant filtering, and statistical modelling to extract meaningful insights.

Publications

1. Prospective avenues for human population genomics and disease mapping in southern Africa
2. The recombination landscape of the Khoe-San likely represents the upper limits of recombination divergence in humans

3. <u>GWAS in the southern African context</u>
4. <u>Inferring Recombination Patterns In African Populations</u>
5. <u>Local ancestry inference in heterogeneous populations—Are recent recombination events more relevant?</u>

Education

Stellenbosch University

- PhD, Human Genetics (Bioinformatics) · (January 2018 - December 2021)
- BSc (Hons) Molecular Biology · (2017 - 2017)
- Bachelor's Degree, Human Life Sciences · (2014 - 2016)