

Lucas Dreyer

Summary

I am a software engineer with 15 years of experience in various industries such as cloud infrastructure, online gaming, and financial services. I completed my Bachelor of Engineering degree in Electrical Engineering with a focus on Computer Science at Stellenbosch University. My passion lies in optimization, machine learning, and enhancing software performance and efficiency. While I enjoy writing elegant code, I also recognize that software development is a means to an end and strive to be pragmatic in my approach.

Experience

Oct 2024 – present: Senior Engineer at Sanlam

- * Built the initial read QoS synchronization system, which later became the foundation for the Tidal team.
- * Now I lead the Tidal team in developing data ingestion and synchronization services.
- * Built foundational AWS services using Lambda, DynamoDB, Kinesis, and SQS.
- * Helped shape the broader system architecture around event-driven design, clean architecture, and CQRS.

Jul 2015 – Sep 2024: Principal Member of Technical Staff at Oracle

Here I worked on many different projects, mostly around compute Infrastructure as a Service for Oracle's public cloud (OCI). OCI has 30+ regional datacenters and hundreds of hypervisor hosts in the smallest regions.

- * Areas of work included: logging event service, placement services (reporting and efficient allocation of compute resources), distributed auditing and anti-entropy services, building an integration testing system, a VM hardware performance monitoring system, GPU passthrough and other low level hardware control systems.
- * Some projects I did solo, others had 100+ devs working on the same repo and everything in between. Some projects I saw through the full lifecycle, others were handed off or inherited. I've taken the technical and planning lead on small projects (less than 5 people and less than 6 months).
- * As part of my ancillary duties I performed more than 100 interviews, attended many recruiting events, and mentored many interns and new developers.
- * During this time I was promoted from Intermediate engineer to Senior engineer, and then to Principal Member of Technical Staff.

June 2012 – Jul 2015: Software Engineer at CodeForte

I focused on the development of a gaming server and client as well as a supporting messaging system. I worked mostly in C++, Node.js and TIScript. My contributions include:

- * Optimized the game simulator to run ten times faster.
- * Built a server-to-server messaging queue based on ZeroMQ.
- * Implemented and verified new games on the server.
- * Built the GUIs for new games in C++ and TIScript (a JavaScript variant).
- * Fixed bugs and added features to a C++ server-client messaging server. Built a client for testing the server in Node.js.

January 2011 – June 2012: Software Developer at Imbongi Capital

My main role was the development of a transaction/payment platform, focusing on integration and supply of services through APIs. I worked mostly in Java and MySQL. Occasionally I did DBA tasks, Linux server configuration and maintenance, configuring TomCat, and server deployment.

June 2010 – July 2010: Intern Software Developer at Open Box Software

My internship included fixing problems and adding new features to BlogEngine.NET, an open source ASP.NET blogging engine.

December 2009 – January 2010: Intern Firmware Developer at the Council for Scientific and Industrial Research (CSIR)

Participated in the LEDGER student programme at the CSIRs Radar and Electronic Warfare division. This involved one week of training in basic radar theory during July 2009 as well as five weeks of firmware design in VHDL and Verilog during December 2009 and January 2010.

Education

M.Sc.: Computer Science at University of Cape Town (2014 - 2018, incomplete). Part time MSc by dissertation focusing on neuroevolution. Neuroevolution is a form of machine learning that uses evolutionary algorithms to train artificial neural networks. My partial thesis: <https://github.com/luc4sdreyer/thesis/blob/main/all.pdf>

B.Eng.: Electrical Engineering with Computer Science at Stellenbosch University (2010)

Skills

Programming languages:

Advanced proficiency: Python, Java

Good proficiency: Bash, Node.js, C++, SQL

Tools and environments:

Docker, Kubernetes, AWS, Flink, Codex, Claude Code. I've worked with all major OSes, IDEs, source control systems, etc.

Leadership:

Technical design leadership, project planning, mentoring, technical interviewing, cross-team collaboration.

Personal

Citizenship: Republic of South Africa. Seeking roles with work visa sponsorship in the EU.

Hobbies and Interests

Computer algorithms, machine learning, artificial intelligence, investing, quantitative finance, astronomy, continuing education, Kaggle