

Jans Rautenbach

Conscientious Software Developer

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📍 Cape Town, South Africa

🗣️ Afrikaans & English

🌐 <https://rauten.co.za>

Education

BSc (Hons) Computer Science - *with distinction*

University of Pretoria

📅 2021

📍 Pretoria, South Africa

Research dissertation: [Insider threat detection using an accepted ontology](#). Degree included electives in social philosophy.

BSc Computer Science & Philosophy - *with distinction*

University of Cape Town

📅 2018 - 2020

📍 Cape Town, South Africa

- Undergraduate research dissertation: [Artificial Moral Agents](#)
- Co-founder and 2020 chair of the [Open Mind Society](#)
- Computer Science department tutor and examiner

Experience

Intermediate Software Engineer

Electrum Payments

📅 Jan 2022 - present

📍 Cape Town, South Africa

- Technical lead of multiple long-term projects, including a payments system that processes up to 200 transactions per second with 99.9% uptime, and at the time was the company's fastest growing product and highest volume service.
- Lead a 3rd-level support team in resolving urgent customer tickets. Consistently cleared around 25% of the tickets per sprint.
- Host of internal tech talks, preventing information silos by disseminating valuable tech knowledge across engineering teams and saving thousands of hours of duplicate work.
- Organised many engineering outreach initiatives, including hosting and presenting at events for technologists and students. This allowed the company to meet its social impact objectives.
- Promoted from Junior to Intermediate Engineer within 12 months of starting.

Research Intern

Centre for AI Research (CAIR)

📅 Dec 2020 - Jan 2021

📍 Remote - Cape Town

Made major contributions in a small research unit that developed a [propositional logic parsing platform](#) capable of parsing and evaluating logical statements. The platform was deployed for use by professors and students in departments Computer Science, Mathematics, and Philosophy at UCT.

Technical Consultant

HyperionDev

📅 May - Dec 2020

📍 Remote - South Africa

Lectured students on Java, OOP, PHP, Docker, Computer Ethics and other concepts, authored technical guides and tasks, and assessed code submissions.

Top Proficient Technical Skills

- Java (OOP, mvn, jsvc, etc)
- Python (pip, venv, etc)
- SQL & DB Architecture
- Linux System Administration
- Docker and Kubernetes (Helm, Argo, EKS)
- DevOps: CI/CD (GH Actions, CircleCI, etc)
- Webdev: Angular, React, Vue, TS, JS, HTML, CSS
- DSL programming

Awards



Science Faculty, UCT

- Dean's Merit List (multiple)
- Top 15% in faculty (multiple)
- Faculty discount scholarship - 2019



Dept of Computer Science, UCT

Certificate of Merit Award (multiple)



CHPC Student Cluster Competition

Third place in South Africa - 2019



International Collegiate Programming Competition (ICPC)

7th place in Africa - 2019



UCT SSC Science's Got Talent

First place - 2020

Academic Publications



The Joint Ontology Workshops (JOWO), Vol 2708

[Toward equipping Artificial Moral Agents with multiple ethical theories](#)

Additional Info



10+ positions held

[Unabridged CV](#)



3 universities and 3 majors

[Unabridged CV](#)



Certifications, soft skills, and more

[Unabridged CV](#)

Personal Projects

Mankind.wtf

Online real-time multiplayer Cards Against Humanity

📅 2020

</> Go, Blazor WebAssembly

🔗 [Online Game](#)

🔗 [Code Repository](#)

In early lockdown I built an open source online Cards Against Humanity platform and hosted it in South Africa, so that local traffic gets prioritised.

Traefik Upstream OAuth

Fully managed upstream OAuth2 authentication

📅 2023

</> Go

🔗 [Plugin webpage](#)

🔗 [Code Repository](#)

After running into a [dilemma with Google CalDav](#), I built a creative solution by writing and self-hosting an OAuth networking adapter with [Traefik](#). The plugin automatically manages OAuth with the upstream host so that the downstream client need not implement it.

LoCulator

Simple API for calculating project LoC

📅 2020

</> Ruby on Rails, Docker

🔗 [Live Demo](#)

🔗 [Code Repository](#)

Surprised that no such service exists, I built my own open API for calculating the lines of code (LoC) in any git repository. Used for fun statistics on my website's project page.

The complete list of my 25+ projects is available on [my website](#).

About me

My hobbies include

- Head-bobbing to minimal techno
- [Blogging](#) about life
- Rocking hard at music festivals
- [Humane technology](#) activism
- Not eating meat

Why philosophy and tech? Ethical thinking is paramount in the tech industry today. With technology's profound impact on lives and society, it's crucial to guide innovation responsibly. Data privacy, AI, and algorithmic biases are but a few examples of issues that need equitable and trustworthy solutions. Embracing ethics creates a better digital future by upholding human rights and safeguarding against harm.

Now more than ever we need front-line IT professionals that can think critically and implement ethical software that values human welfare over other short-sighted incentives. Luckily I'm not alone. There are [tech ethicists](#) all over the world fighting the same fight for truly better technology.

Jans in the Media

📺 [Google Dev Group CPT, Jun 2023](#)
[The AI Race](#)

📺 [The Closing Bracket, Jan 2022](#)
[Your Digital Self](#) (p. 12)

📺 [Science Matters, Nov 2020](#)
[Ethically Aware Robots](#) (p. 15)

📺 [UCT News, May 2020](#)
[Bringing laughs to those in lockdown](#)

📺 [UCT DevSoc Blog, Mar 2020](#)
[How to sort posts like a pro](#)

Attended Workshops & Indabas

UCT Futures in Health

Design workshop series

📅 2019

📍 Faculty of Health Sciences, UCT

A startup incubator which aims to engage students in identifying, deconstructing and developing solutions to contextually-relevant problems facing healthcare in South Africa. My team built a production-ready Hospital CMMS system with a user-friendly frontend and securely synchronised backend.

McKinsie & Co Digital

Student design workshop

📅 2019

📍 UCT Campus

Tech design thinking workshop covering various frontend UX topics, and business development content.

Facebook

Mentorship program

📅 2019

📍 Remote - USA

A year-long remote mentorship program with the purpose of teaching both soft and hard problem-solving skills required for the software engineering industry.