David Culemann

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🎓 Education

University of Cambridge — Cambridge, UK

*MPhil in Energy Technologies - **High Performance*** *Oct. 2020 – Sep. 2021*
- Co-founded a social enterprise developing sustainable solar cooking solutions for rural communities, securing £2,000 in funding through the 2021 Parmee Prize for Entrepreneurship.

University of Southampton — Southampton, UK

*MEng Mechanical Engineering with Sustainable Energy Systems - **1st Class Honours*** *Sep. 2015 – Jul. 2020*

</> Technical Knowledge

Frontend: TypeScript, JavaScript, React, Remix, Next, CSS, Tailwind, TanStack Query, Cypress, Figma, Cytoscape.js
Backend: Firebase, Supabase, MongoDB, Node, Express, PostgreSQL, GitLab CI

💼 Industrial Experience

Darktrace — Cambridge, UK

Senior Software Engineer *September 2024 - Present*
- Leading technical recruitment and mentorship for 6+ developers, implementing structured growth through pair programming, code reviews, and domain ownership.
- Delivered several key projects, including a dynamic report generation dashboard and a real-time status monitoring web page, improving customer visibility on service downtimes and streamlining reporting workflows.
- Steering efforts to break up the monolithic codebase into reusable UI views using micro frontends.

Software Engineer *June 2022 - September 2024*
- Leading UI development for Darktrace /CLOUD, the company's flagship cloud security product, while coordinating a cross-functional team of developers and designers, and collaborating with backend teams on API architecture.
- Developed interactive diagrams with **Cytoscape.js** to map cloud architectures, highlight high-risk attack paths, and guide security workflows, informed by feedback from stakeholders such as internal security and early adopters.
- Maintained an internal UI component library used across 20+ projects (1000+ imports) to promote design consistency and accelerate development by minimizing code duplication.
- Championed developer experience improvements including **GitLab CI** build automation, centralised **Prettier** rules, and **TanStack Query** for async state, driving adoption through presentations and documentation.

Carno — Cambridge, UK

Founding Engineer *January 2022 – April 2022*
- Founding full-stack engineer at a startup aiming to accelerate domestic decarbonisation by simplifying and optimising heat pump installation and sourcing with a mobile surveying application.
- Architected and developed the MVP mobile app using **React Native**, **TypeScript**, **Node.js**, and **Firebase**.
- Improved code base quality by introducing CI/CD pipelines covering linting, code formatting, automated testing using **Jest** and **Cypress**, and maintaining in-line and wiki documentation.

Academy — London, UK

Trainee Software Engineer *August 2021 – January 2022*
- Founding scholar of a selective holistic training programme covering full-stack technologies and leadership.

Rolls-Royce Motor Cars — Chichester, UK

Computer-Aided Quality Systems Intern *September 2017 – September 2018*
- Digitalised the tool tracking process (**VBA**), resulting in annual savings of ~£10,000 and mitigating quality risks.

○ Projects

Corpify | https://remix-shadcn-boilerplate.vercel.app/ *Remix, Supabase, Shadcn, Tailwind*
- An open-source boilerplate for quickly launching SaaS applications with **Remix**, **Supabase** and **Shadcn**.

LovebotAI | https://lovebot-ai.vercel.app/ *React, MongoDB, Stripe, OpenAI*
- A mobile-first web-app for generating dating app profiles with AI, featuring a token monetization system.

GeoGenius | https://geogenius.vercel.app/ *React, TypeScript, Figma, Firebase, Express*
- A quiz app inspired by my love of geography, designed in **Figma** and implemented an auth flow with **Firebase**.