

# DANIEL NIELS

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## PROFILE SUMMARY

Fullstack software engineer. Specialised in creative and technical engineering. Ethical and sustainable roles only.

## TOOLS & TECHNOLOGIES

<b>Software &amp; Tools</b>	<b>Language:</b> Python // JavaScript // Rust // Haskell // SQL // C/C++
	<b>Front-end:</b> Svelte // React // Vue // Three JS // WebGL // WebGPU
	<b>Back-end:</b> Supabase // Flask // Docker // PostgreSQL // MongoDB
	<b>Full-stack:</b> GCP // AWS // Linux // GraphQL // Blender // PyTorch

## PROFESSIONAL EXPERIENCE

<b>Aufbau</b> <i>Founder // Web Engineer (Freelance)</i>	October 2022 - Present <i>London, UK</i>
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- Creative Web Engineering // WebGPU Specialist // Bespoke Websites, Systems, & Apps - from scratch.
- Tech Stack: Rust // C++ // SvelteKit // Three JS // Web GPU // Python // Javascript

<b>VSProwess</b> <i>Graphics Engineer (Contract)</i>	January 2023 - Present <i>London, UK</i>
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- Bespoke 3d data renderer in Rust/C++. Rendering 1e6 - 1e9 voxels simultaneously and interactively.
- Tech Stack: Rust // C++ // WebGPU // Dawn

<b>Midnight Agency</b> <i>Senior Fullstack Engineer (Contract / Freelance)</i>	March 2022 - Present <i>London, UK</i>
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- Senior Fullstack engineer within a creative technology web agency. Autonomous position among technical leads.
- Tech Stack: Svelte // React // Three JS // Next // Vercel // Docker // CMS // WebGL

<b>Hexis</b> <i>Senior Fullstack Engineer (Contract)</i>	November 2021 - February 2022 <i>London, UK</i>
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- Fullstack developer. Contracted to take start-up from prototype to app store release. Scoped, hired, and led a team (react native developer and junior developer) to deliver a robust and scalable application within 4 months.
- Tech Stack: React Native // Next // GCP // Apollo // GraphQL // Docker // Firebase

<b>Kubrick Group</b> <i>Fullstack Software Engineer</i>	July 2020 - August 2021 <i>London, UK</i>
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- Fullstack software engineer on a greenfield community learning platform. Vue.js and Nuxt app deployed on AWS.
- First Project engineer. Hired and led technical team to take product from concept to MVP with DevOps strategy.
- Tech Stack: Nuxt // Vue // D3 // Python // PostgreSQL // MongoDB // AWS // Docker

<b>Procter &amp; Gamble</b> <i>Machine Learning Engineer</i>	November 2018 - June 2020 <i>Reading, UK</i>
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- Engineer and co-architect on a microservice-based data network & machine learning platform. Bespoke system enabled large multinational to run distributed machine learning models on data assets stored across continents.
- Tech Stack: Python // Vue // Flask // Celery // Docker // PostgreSQL // MongoDB // CUDA // Linux

## EDUCATION

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### University College London

*MSci Neuroscience*

September 2014 - May 2018

*London, UK*

- Course of study focused on Cognitive Computational Neuroscience and Dynamical Systems.
- Masters Dissertation: 'Dendritic Spine Stability during Regulative Homeostasis' with Prof Tara Keck
- Bachelors Dissertation: 'Neural Oscillatory Rhythms: Physics & Function' with Dr Lorenzo Fabrizi

### Kings College London

*MA Philosophy*

September 2021 - September 2022

*London, UK*

- Course of study focused on Kant, Mind, Meta-Metaphysics, Communication, and Representation.
- Masters Dissertation: 'Carving the Mind at its Joints' with Prof Bill Brewer

## RESEARCH

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### University College London

*Systems Engineer // Research Assistant*

October 2022 - Present

*London, UK*

- Working with Dr Daniel Bush and Prof. Neil Burgess on topics in spatial representation and neuroinformatics.
- Building a real-time, closed-loop stimulation system for manipulating Sharp-Wave Ripples in human subjects.

### University of Oxford

*Fullstack Engineer // Research Assistant*

July 2021 - Present

*Oxford, UK*

- Creating a mental state tracking tool with Dr. Dan Joyce, a computational and clinical psychiatrist.
- Lightweight and customisable tool to facilitate psychiatric research on the dynamics of mental state over time.

## OTHER

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### Raumen Bar

*London Space and Representation Reading Group*

August 2022 - Present

*London, UK*

- Articles and research on space, action, and representation across neuroscience, philosophy, and mathematics.
- Current members from UCL, Gatsby, SWC & KCL. Always open to new members, reach out !!

### Bartlett School of Architecture

*Computational Soul: Guest Seminar*

July 2021 - September 2022

*London, UK*

- Invited to run guest seminar on 'computational soul' as part of the Xalon Digital-Communities lecture series.
- Discussed the notions of soul and representation in objects, and what it takes to synthesise 'computational soul'.

### Metamodernism as a Service

*AI-Generated Poetry Series*

December 2020 - September 2021

*London, UK*

- Computer generated 'poetry' made with the early GPT-3 demo API. Exploring notions of self in artificial agents.
- 3AM Bauhaus-FM radio performance with Vivien Jester in Weimar, Germany. Gallery show in Portland, USA.