

# DANIEL HUMPHRIES

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## PROFILE SUMMARY

Fullstack software engineer. Specialised in creative and technical engineering. Ethical and sustainable roles only. Currently working as an RA in the Human Electrophysiology Lab at UCL. Still open to small & creative projects.

## 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

## EDUCATION

<b>University College London</b> <i>MSci Neuroscience</i>	September 2014 - May 2018 <i>London, UK</i>
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- 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

<b>King’s College London</b> <i>MA Philosophy</i>	September 2021 - September 2022 <i>London, UK</i>
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- 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

<b>Max Planck Institute for Mathematics in the Sciences</b> <i>Research Intern // Web Engineering</i>	Dec 2023 - Present <i>London, UK</i>
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- Working with Dr Erika Roldan Roa on topics spanning mathematics, psychology, computer science, and ML.
- Fuller details available on project completion.

<b>University College London</b> <i>Research Assistant // Systems Engineering</i>	October 2022 - Present <i>London, UK</i>
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- 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.

<b>University of Oxford</b> <i>Research Assistant // App Development</i>	July 2021 - August 2022 <i>Oxford, UK</i>
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- 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.

## 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

### **Midnight Agency**

March 2022 - September 2022

*Senior Fullstack Engineer (Contract / Freelance)*

*London, UK*

- 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

### **Hexis**

November 2021 - February 2022

*Senior Fullstack Engineer (Contract)*

*London, UK*

- 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

### **Kubrick Group**

July 2020 - August 2021

*Fullstack Software Engineer*

*London, UK*

- 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

### **Procter & Gamble**

November 2018 - June 2020

*Machine Learning Engineer*

*Reading, UK*

- 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

## **OTHER**

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### **Bartlett School of Architecture**

July 2021 - September 2022

*Computational Soul: Guest Seminar*

*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'.