

# NIELS HUMPHRIES

WWW.AUFBAU.IO // DAN@AUFBAU.IO

Haggerston ♦ London ♦ UK

## PROFILE SUMMARY

---

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

## TOOLS & TECHNOLOGIES

---

<b>Software &amp; Tools</b>	<b>Languages:</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

## PROFESSIONAL EXPERIENCE

---

<b>Aufbau</b> <i>Founder // Web Engineer (Freelance)</i>	October 2022 - Present <i>London, UK</i>
---	---

- Creative Web Engineering // Bespoke Websites, Systems, Apps from scratch.
- Tech Stack: SvelteKit // Three JS // Supabase // Rust // WebGL // Web GPU

<b>VSProwess</b> <i>Graphics Engineer (Contract)</i>	January 2023 - Present <i>London, UK</i>
---	---

- Building a bespoke Data vis. component. Rendering over 3 million data points simultaneously and interactively.
- Tech Stack: C/C++ // WebGPU // Dawn

<b>Midnight Studio</b> <i>Senior Fullstack Engineer (Contract)</i>	March 2022 - September 2022 <i>London, UK</i>
---	--

- Senior Fullstack engineer within a digital product agency. Autonomous position among technical leads.
- Managed technical builds including a leading IoT systems agency and a number of digital design projects.
- Tech Stack: Svelte // React // Three JS // Next // Vercel // Docker // CMS

<b>Hexis</b> <i>Senior Fullstack Engineer (Contract)</i>	November 2021 - February 2022 <i>London, UK</i>
---	--

- 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>Machine Learning Engineer</i>	November 2018 - August 2021 <i>Reading, UK</i>
--	---

- Engineer and co-architect on a microservice based data network & machine learning platform. Bespoke system enabled large multinational to run machine learning models on data assets stored across continents.
- Tech Stack: Python // Vue // Flask // Celery // Docker // PostgreSQL // MongoDB // CUDA // Linux

## EDUCATION

---

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

- Course of study focused on 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>Kings College London</b> <i>MA Philosophy</i>	September 2021 - September 2022 <i>London, UK</i>
---	--

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

## RESEARCH

---

**University College London**  
*Research Assistant*

October 2022 - Present  
*London, UK*

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

**University of Liverpool**  
*Research Assistant*

July 2021 - Present  
*Oxford, UK*

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

## OTHER

---

**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'.

**Raumen Bar**  
*London Space and Representation Reading Group*

August 2022 - Present  
*London, UK*

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