

Moritz Wallbrecher

Portfolio Version

London (open to relocate) • +49 152 04303129 • moritz@wallbrecher.net • [Portfolio](#) • [LinkedIn](#) • [GitHub](#).

Design-engineer with a background in game design and a focus on interaction systems, prototyping, and emerging interfaces. Experience across BMW Group InCar UX, motion-driven prototyping, and internal platform design. Authored an HCI paper on embedding AI into established GUI paradigms through OS-level interaction concepts. I work with AI-Agents to build testable prototypes while understanding the stack deeply enough to extend, debug, and ship experienceable products.

PUBLICATION

Embedding AI at the Point of Intent (SAI Intelligent Systems Conference, London 2026) Apr 2026

- Designed and ran an n=30 controlled HCI study end-to-end, from prototype to analysis, comparing my embedded drag-and-drop AI invocation against a chat-window baseline; the embedded model completed tasks **18–42s faster** and was preferred by **30/30 participants**.

SELECTED PROJECT

AI Drop (Native macOS; SwiftUI + AppKit; open source; v0.9 shipped) [\[Link\]](#) ongoing

- Progressed from Rive prototype to n=30 user study to native macOS implementation.
- It uses the MacBook notch as an AI invocation surface: drag a file to the top of the screen; the notch expands into a context-aware AI assistant layer, collapsing a multi-step browser workflow into a single drag.
- Multi-provider LLM layer: Anthropic, OpenAI, Groq, Ollama (on-device), zero third-party dependencies.

Mindful Vehicle (React, JSON, JavaScript) [\[Link\]](#) May 2026

- Designed and built a working InCar HMI simulation for context-aware AI support during delay-related journeys.
- Interaction: detects when delay becomes meaningful (calendar + traffic + ETA) and surfaces the next best action as a glanceable, single-confirmation prompt, not a conversation.
- Grounded in 5 driver interviews: workflow-native support at the point of intent, not another conversational layer.

EXPERIENCE

Creative Technologist Intern, BMW Group Feb 2025–Jul 2025
InCar UX *Munich*

- Identified production-viable use cases for Rive in BMW's InCar UX stack and built the internal case that contributed to **BMW iVentures'** subsequent **investment in Rive**.
- Validated it through **30+ iterations** on **target hardware**, proving C++ runtime compatibility and the designer-to-engineering handoff across design, runtime, and platform teams.
- Built the production pipeline extending BMW's design language from Figma and Rive onto in-car target hardware.

Working Student, BMW Group Jul 2022–Jul 2024
HV Electronics, Quality Engineering *Munich*

- Designed and built internal knowledge-sharing platform by translating onboarding, collaboration, and expert-finding pain points into a more connected cross-team experience for **~130 colleagues across 7 departments**.

EDUCATION

MSc User Experience Design, Kingston University London (ongoing) Aug 2026

- Focus: Human-AI Interaction & UX, AI-Driven Interfaces, empirical UX research

BA Game Design, 2:1 Honours, University of Hertfordshire Sep 2024

- Thesis: Designed and developed a real-time ray-traced UE5 BMW i5 configurator streamed **in-browser** at **4K/30fps**, contributing to explorations around future automotive brand communication through cinematic yet interactive browser experiences.

SKILLS

Design & Prototyping: Figma, Rive, Adobe Creative Suite, Design Systems, Motion, Micro-Interactions, MadMapper

AI-assisted Development: Claude Code, Codex, Cursor

Tech Stack: React, HTML, CSS, JavaScript, Python, C++

3D: UnrealEngine, Blender, 3DS Max & Maya

Research: User Interviews, Controlled Studies, Usability Testing, Technical Documentation

Languages: Native German • Fluent English