

# Jonatan Wallgren

Senior Frontend & Systems Engineer

Sweden · Remote-friendly

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## Professional Summary

Senior frontend engineer with 20+ years' experience delivering high-performance, composable, and system-aware interfaces across gaming, media, and embedded platforms. My work spans real-time multiplayer poker systems, custom game engines, and next-generation TV UIs — domains where **correctness, latency, and trust are non-negotiable**.

I have repeatedly been the person trusted to deliver the final, difficult 10% of a project. SkyPoker and Virgin Poker remain the most technically and psychologically demanding work of my career: real-time concurrency, multiplayer state, monetary interaction, and a strict intolerance for UI failure.

The game engine I helped rewrite and maintain at Gamesys — supporting ~100 live real-money titles — was similarly complex, requiring sustained performance tuning and architectural discipline.

More recently, I've led frontend architecture on embedded TV platforms at Xperi, working within tight memory ceilings, real-time media pipelines, and partner-variant complexity. Across all roles, the through-line is the same: **clarity under pressure, systems thinking, and the ability to stabilise complex products**.

I'm currently focused on sustainable engineering practices, **AI-accelerated development workflows**, and long-term product alignment within remote-friendly, low-drama teams.

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## Core Competencies & Technical Skills

### Frontend systems & performance

Expert in React, TypeScript, and JavaScript, with extensive experience building robust UI architectures for real-time, performance-critical products. Proficient in ClojureScript and Svelte, with a focus on composability, predictability, and long-lived codebases.

### Architecture & composability

Designed and maintained component libraries, modular state systems, and large-scale frontend architectures across gaming engines, embedded TV platforms, and high-volume retail integrations.

### Full-stack & infrastructure awareness

Comfortable across the stack: experienced with server-side rendering, Redis-based caching layers, database modelling, and cloud migrations (AWS → GCP). Able to contribute meaningfully beyond the frontend when the system demands it.

### **Integration & cross-runtime systems**

Bridged web and native layers (C++, custom engines, embedded devices), including work with real-time media pipelines, service workers, and low-level browser APIs. Strong background in hybrid JS/Lua environments and cross-language interface stability.

### **Real-time, offline-first & high-concurrency UX**

Built interfaces for multiplayer poker clients, embedded TV UIs, and high-traffic retail widgets — with attention to sync integrity, failure modes, constrained networks, and long-uptime behaviour.

### **Engineering philosophy**

Advocate for functional design principles, composable state, and testable architecture. Deep experience with CI/CD, long-term maintainability, and navigating complex legacy systems.

### **Technical leadership & mentoring**

Served as team lead and senior mentor on multi-year distributed teams. Guided onboarding, architecture decisions, and system refactors with focus on clarity and longevity.

### **Tooling, DX & AI-accelerated workflows**

Invested in performance tooling, developer experience, and AI-assisted development (Codex, Copilot, prompt-driven automation). Comfortable in fast-iteration environments and exploratory prototyping.

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## **Professional Experience**

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### **Xperi (2021–2025)**

#### **Staff Engineer & Team Lead – Embedded UI Systems**

Led frontend architecture and delivery for TiVo’s next-generation digital TV platform — a performance-critical embedded system deployed to millions of devices worldwide.

**Key contributions** - Designed and implemented **composable React/TypeScript component libraries**, enabling consistent UX and shared logic across product variants.

- Improved UX fidelity and resilience within a complex **offline-capable architecture**, handling long-uptime behaviour and numerous edge cases.
- Integrated tightly with **native C++ modules** for real-time media handling and device-level configuration.
- Drove architectural decisions balancing **UX quality, memory ceilings, startup constraints**, and embedded limitations.
- Resolved difficult production issues across legacy and partner-specific codebases — often as the engineer trusted to stabilise features during the critical final phase.
- Onboarded and mentored engineers across distributed teams, raising code quality and performance awareness.

**Role context:** position concluded as part of a company-wide reorganisation, with a clean and negotiated off-boarding.

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## Stylitics (2019–2021)

### Senior Frontend Engineer – High-Scale Retail Experience

Developed high-traffic product-recommendation widgets for major US retailers, built in ClojureScript and React and embedded across diverse e-commerce environments.

**Key contributions** - Built **fast, predictable UIs** in a purely functional stack, enabling multiple daily releases despite minimal formal testing.

- Delivered components handling *tens of millions* of daily interactions with low latency and strict defensive coding.
  - Maintained a long-lived, business-critical codebase using disciplined state management and functional patterns.
  - Established a **robust CircleCI pipeline** to stabilise rapid internal deployment cycles.
  - Delivered stable, performant frontend code amid shifting designs and limited process.
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## Dirigenta (2021)

### Frontend Developer – Visualisation Prototyping (Freelance)

Prototyped interactive data-visualisation components in ClojureScript for a complex analytics platform.

**Key contributions** - Built dynamic charting components using **D3.js, Vega, and Recharts**.

- Explored **3D/WebGL** rendering for spatial interaction concepts.
  - Applied expressive, functional rendering flows to support rapid iteration.
  - Delivered prototypes that informed later architectural direction.
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## Gamesys (2012–2019)

### Platform Engineer – Game Engine, Virgin Poker & Internal Tools

Core engineer on the 2D game engine powering all Gamesys gambling titles (2013–2016) — a performance-critical platform central to millions of pounds in annual revenue.

**Key contributions** - Rewrote and optimised the **Canvas 2D rendering pipeline**, achieving  $\sim 2\times$  performance gains over Pixi.js internally.

- Contributed to engine-level architecture: **transform hierarchies, input handling, state sync, rendering correctness**.
  - Maintained the engine across  **$\sim 100$  live real-money titles**, ensuring performance and stability at scale.
  - Worked within a **hybrid JS/Lua runtime**, fixing deep VM-level issues and maintaining interface stability.
  - Helped build a **Lua $\rightarrow$ JS translation pipeline** to accelerate Virgin Poker delivery.
  - Instrumented behavioural analytics for Virgin Poker.
  - Built an internal **project-tracking tool** (React + Java/MongoDB + LDAP), working full-stack.
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## OpenBet (2006–2012)

### Frontend Engineer – Platform Architecture, Live Ops & Game Clients

Worked across architecture, live operations, and product delivery in a regulated, high-stakes environment.

**Key contributions** - Introduced a **formal MVC architecture** adopted across all gambling clients.

- Developed deep skill in **debugging legacy codebases** under live operational pressure.
  - **Owned final delivery of the SkyPoker client** — resolving critical defects and communicating clearly with stakeholders during launch.
  - Tackled non-functional problems (memory leaks, GC churn, perf bottlenecks); built a **custom profiler** for constrained runtimes.
  - Developed OpenBet's first **JavaScript-based casino games** (Blackjack & Roulette).
  - Built a bespoke **3D CSS animation engine** and shipped Blackjack as a hybrid iOS/WebView app.
  - Established foundational expertise in real-time rendering and game engines.
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## NetEnt (2005–2006)

### Lead Developer – Flash Casino Platform (Greenfield Rewrite)

Lead developer for NetEnt's first Flash-based online casino — a greenfield replacement of the existing Java frontend. The shift to Flash/ActionScript significantly reduced user friction, resulting in substantial increases in player uptake and revenue.

**Key contributions** - Led the **complete frontend rewrite**, moving the casino platform from Java to Flash/ActionScript at a time of Flash's near-universal adoption.

- Designed and implemented a **custom MVC architecture** that remained in production for several years.
  - Ran a **RUP-style upfront design process**, modelling every class and subsystem in UML prior to implementation — an unusually methodical and instructive architectural experience.
  - Delivered full **localisation support**, including Simplified Chinese, enabling international expansion.
  - Built **scaffolding tools** generating code from UML diagrams, ensuring consistency and accelerating delivery.
  - Contributed to a major **commercial uplift** by reducing friction and improving user experience.
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## Tewonder (2004)

### Developer – SVT Julkalendern 2004

Worked on the digital companion experience for SVT's 2004 Christmas Calendar, delivering interactive content tied to the televised series.

**Key contributions** - Developed **24 interactive mini-games** in Flash/ActionScript, each corresponding to a daily episode.

- Delivered the full project within a strict **two-month production window** aligned with TV broadcast schedules.

- Helped bridge **broadcast storytelling and digital interactivity**, contributing to one of Sweden's most recognisable annual media events.
  - Built experience in rapid iteration, multimedia integration, and deadline-driven delivery.
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## Svenska Spel (2003–2004)

### Developer – Digital Betting Platform

Worked on Svenska Spel's digital platform for products such as Stryktipset, Måltipset and Oddset, focusing on advanced ActionScript-based frontends.

**Key contributions** - Developed **advanced ActionScript interfaces** for real-time betting experiences.

- Created "**Pick and Click**", a new interaction pattern later reused across multiple games.
  - Built a **real-time goal update system** for Måltipset, showing goals live as matches progressed.
  - Gained experience in a **large, process-driven organisation**, working with testers, release managers, and compliance stakeholders.
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## Xtractor Interactive (2000–2003)

### Programmer – E-learning Platform & Interactive Media

Worked on early e-learning systems and interactive media projects.

**Key contributions** - Developed **eStudio**, an e-learning platform with its own DSL for authoring structured course material.

- Built **Akatellas hemlighet**, an audio-based game for blind users, pioneering early accessibility-oriented design.
  - Produced interactive content in **Flash/ActionScript**, forming the technical foundation for later work on large-scale, real-time systems.
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## Additional

- Swedish and English (native-level professional proficiency)
- Remote-first, distributed-team experience since 2019
- Experience working in regulated industries (gambling, TV platforms)