Bob Rost

Seattle, WA bob@bobrost.com http://bobrost.com LinkedIn: https://www.linkedin.com/in/bobrost/

Summary

Senior software engineer and system architect with 25+ years of experience building real-time interactive systems across XR, games, web, audio, input, and research-driven prototyping. Deep technical strength in C++, Typescript, low-latency runtime design, and intuitive interaction models. Proven ability to lead architecture, guide teams, and deliver complex products from prototype through production. Currently co-founding and driving the technical direction of a new AI-powered learning platform.

Experience

CO-FOUNDER & CTO | SKILVANA | SEATTLE, WA / REMOTE | 2025 - PRESENT

- Leading the end-to-end technical direction and product architecture for a new AI-powered learning platform. Responsible for system design, engineering execution, and guiding a small cross-functional team from concept through MVP and early user testing.

SENIOR SOFTWARE ENGINEER | META | SEATTLE, WA / REMOTE | 2020 - 2025

- Led development of real-time haptic interaction systems in Unreal Engine and a custom game engine, enabling research into social touch, embodiment, and interaction fidelity in VR.
- Built device drivers and tooling supporting 50+ haptics research studies across Reality Labs.
- Co-authored published research on social haptic communication in immersive environments.
- Designed and prototyped accessibility systems for spatial computing, identifying limitations in current hand-tracking ML models and informing future research direction.
- Led accessibility and inclusivity reviews for 25+ XR and hardware products across Meta, improving usability and equitable experience outcomes.
- Architected cross-platform haptic interaction frameworks supporting Unreal Engine, OpenXR/WebXR, Reality Labs SDKs, Android, embedded devices, and React Native.
- Tech: C++, Unreal Engine, OpenXR/WebXR, TypeScript/JavaScript, Android, custom embedded and haptics systems

SENIOR SOFTWARE DEVELOPMENT ENGINEER | AMAZON GAME STUDIOS | SEATTLE, WA | 2011-2020

- Led cross-functional teams building UI, accessibility, and input systems for AAA multiplayer titles, including *Crucible*, Amazon's first large-scale PC release.
- Architected scalable C++/JavaScript UI frameworks enabling modular, real-time communication between game and engine systems.
- Designed client input architecture for *The Unmaking*, a hybrid cloud-rendered tablet game, solving latency challenges and showcasing AWS GPU cloud performance.
- Co-invented core architecture for *Twitch Extensions*, driving a 10× increase in interactive viewer engagement and widespread industry adoption.
- Delivered multiple shipped titles and prototypes across gameplay, backend, and metagame systems, supporting Amazon's emerging device and service initiatives.
- Filed 13 patents covering human–computer interaction, procedural content generation, and wearable computing.
- Tech: Lumberyard, Unity, C++, WebKit, AWS, Cloud Rendering, Game/UI Frameworks

CO-FOUNDER, LEAD ENGINEER | MEAN JELLYBEAN | CHARLOTTE, NC | 2010 – 2011

- Founded company and shipped *Super Bride and Groom*, developing all core engine systems and tools.
- Built deployment pipelines across Flash, iOS, and Xbox 360, including payment and advertising backend systems.

VICE PRESIDENT OF TECHNOLOGY | ETCETERA EDUTAINMENT | PITTSBURGH, PA | 2005 – 2010

- Led engineering for 12 released training and simulation titles for museums and industry clients.
- Developed computer vision-based crowd interaction systems for installations supporting 40,000+ participants.

Earlier Roles

Gathering of Developers, Ritual Entertainment, Electronic Arts, XGaming

Patents, Publications, and Research

- 15 issued patents in haptics, AI-driven interaction, wearable computing, and procedural systems.
- Published research on mediated social touch (*Frontiers in Computer Science*).
- Ongoing research in ATRAC3 audio compression (minidisc.bobrost.com)

Education

Carnegie Mellon University | Pittsburgh, PA

- **Master's in Entertainment Technology** (MET)
- **Bachelor of Science in Computer Science**
- Minor in Bagpipe Performance
- Research in VR motion capture, NES game development, and interactive storytelling.

Skills

Languages: C++, TypeScript, JavaScript, C#, Python

Frameworks / Platforms: Unreal Engine, Unity, OpenXR/WebXR, Android, Embedded Systems, React Native

Focus Areas: XR interaction systems, real-time systems, haptics, audio processing, UX input frameworks, accessibility

Shipped Titles

Contributed to 20+ shipped titles in gaming, AR/VR, and interactive systems.