

# Jamie McCarter

Design Technologist · Cross-Functional Product Engineering & Leadership

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## Design technologist and engineering leader who bridges product, design, and engineering.

Turns ambiguous problems into working software, clear interaction models, and connected cross-functional teams. At Apple, managed and mentored engineers, shipped internal tools presented to Apple's internal AI/ML organization, and helped design, research, product, and documentation teams align around shared problems through clear communication and collaboration. Previously led a six-person team at Weta Digital, designing and building the patented character-rigging system used across dozens of major cinematic productions, including two films that won the Academy Award for Best Visual Effects.

**8 U.S. patents · 6 Apple recognition awards for patented inventions · Contributor to 2 Academy Award-winning films**

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## EXPERIENCE

### Apple

*Senior Software Engineer · Designer & Prototyper · 2018-Present*

- Managed and mentored a team of **6 engineers** as a Software Engineering Manager, and have continued mentoring individually since moving into design and prototyping – including coaching a technical writer on Apple technology and guiding a colleague's career growth.
- Designed and shipped two internal tools from concept through production, applying **agentic, AI-assisted development workflows** alongside product design and software engineering; presented both to **Apple's internal AI/ML organization**.
- Designed UI/UX and built prototypes for two confidential Apple software applications, translating ambiguous concepts into interaction models and implementation-ready designs, and coordinating design, engineering, research, product, and documentation partners around complex workflows.
- Built functional design explorations in **C++**, **Swift**, and **HTML/CSS/TypeScript** when static designs couldn't communicate complex behavior; contributed production code to **RealityKit**, **Reality Composer**, **macOS Preview**, and **Quick Look for visionOS**.

### Weta Digital (now Wētā FX)

*Software Engineer / Lead Puppet Creature Technical Director · 2013–2018*

- Led a team of **6 developers and technical artists** delivering production-ready rigging and animation technology for major cinematic productions, including **War for the Planet of the Apes**, **Avengers: Infinity War**, and **Avatar: The Way of Water**.
- Designed and developed a parametric character-rigging system for real-time animation, translating artistic requirements and production constraints into reliable engineering systems.
- Traveled to Los Angeles to support **James Cameron's Lightstorm Entertainment** on the production of **Avatar: The Way of Water**, guiding the Lightstorm team through a major software version upgrade and giving them confidence in the upgrade.
- Led development of Weta's **AnimFx/Governor** systems, presented at **SIGGRAPH 2019** by a direct report and an internal client.
- Co-inventor of the patented **Koru Puppet** character-rigging system.

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## SELECTED EARLIER EXPERIENCE

*Additional industry experience: Double Negative · Aardman Animations · Zombie Flesh Eaters · Cinesite · Shynola · Toxic Blob · Storm Studios · Peerless Camera Company · Guru Studio · Axis Animation · One Of Us · Digital Extremes · Snow Castle Games, and others.*

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## TECHNICAL EXPLORATIONS

*My independent projects are where I explore ideas I'm curious about, often moving across layers of the software stack as the problem demands. That might mean runtime architecture, graphics, compilers, developer tools, or interfaces. Increasingly, they're also a way to explore how best to work with programming agents; what to delegate, what to keep deterministic, how to structure a codebase for effective collaboration, and where human judgment still matters most.*

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## SELECTED FILM & VFX CREDITS

*Avatar: The Way of Water · Avengers: Endgame · Avengers: Infinity War · Alita: Battle Angel · Gemini Man · Justice League · Guardians of the Galaxy Vol. 2 · War for the Planet of the Apes · The Jungle Book · The Hobbit: The Battle of the Five Armies · Troll Hunter · James Bond: Die Another Day · Tomb Raider II: The Cradle of Life · The Hitchhiker's Guide to the Galaxy*

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## PATENTS & RECOGNITION

- Co-inventor of **eight U.S. patents** in 3D graphics, animation, and related technology, including the patented **Koru Puppet** character-rigging system.
- Recipient of **six Apple recognition awards**, each recognizing a patented invention.
- Visual Effects Society active voting member since 2016.
- Contributed to the visual effects of **two Academy Award-winning films** and six films nominated for Best Visual Effects.

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## EDUCATION

### Algonquin College

*Animation – Television Diploma*