

Magnus Johnson

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Senior Software Engineer at Apple w/ Expertise in Computer Graphics and Machine Learning

6+ years of experience shipping graphics and AI features for the Vision Products Group at Apple. Specialized in computer graphics, machine learning, UI/UX, and interactive 3D systems, with a strong track record of delivering high-quality results and impactful executive-facing demos.

Experience

Senior Software Engineer – Vision Products Group, Apple Inc. | 2019 - Present (including internship)

- Led engineering for Persona Lighting Filters on visionOS, improved user acceptance of Persona avatars above a critical launch threshold, feature showcased in Apple marketing materials and product announcements
- Designed and productionized a light normalization ML model and inference pipeline to resolve a critical blocker for visionOS Persona enrollment by expanding robustness across real-world lighting scenarios
- Drove technical direction for several Spatial Preview features (immersive preview, lighting effects, gesture controls), led efforts across several teams (designers, QA, engineering), many features shipped in visionOS 27
- Designed and shipped a novel don/doff recognition algorithm using signal processing techniques, resolving a critical rendering issue blocking Personas release
- Managed Spatial Preview presubmission pipeline to accelerate cross-functional QA/developer triage on urgent issues, developed several innovative internal tools to increase build acceptance rate and improve product stability
- Built several interactive visionOS Widgets prototypes that directly informed the final shipping implementation and design; led a specialized prototyping team and coordinated contributions from engineering and design teams
- Prototyped and evaluated novel ML systems (e.g., topological style transfer, erosion simulation, 2D-to-3D landscape generation & foliage simulation) that informed feature development in Reality Composer and Reality Composer Pro

CEO & Founder – MagMHJ, LLC | magmhj.com | 2004 - 2020

- Released Minima suite of creative applications (Sculptor & Animator) that have been downloaded over 54.5K times; featured in educational stores & newsletters
- Released 12 apps (mobileML, Archipelago, TapNote, etc.) for mobile & desktop platforms that have been downloaded in over 145 countries

Education

Massachusetts Institute of Technology – Graduated June 2020

- M.Eng. in Electrical Engineering and Computer Science
- B.S. in Electrical Engineering and Computer Science

Skills

- Software Engineering & Graphics – Python, Swift, Metal, C#, Objective-C, PyTorch, Typescript, CI/CD Systems
- Design & Content Creation – Adobe Suite, Fusion 360, Apple Creative Tools (Motion, FCP), GIMP, Blender

Published Patents

- **Granted:** US 12,315,071 (Generating & presenting 3D landscapes), US 12,592,019 (GUIs for motion editing & animation)
- **Pending:** 5 applications including object control gestures, sensor-based camera activation, and don/doff detection