

# WILLIAM J. FETH

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**SUMMARY:** Experienced iOS and macOS software engineer seeking a challenging role with a team that creates cutting edge and intuitive technology and aims to create surprise and delight.

**EXPERIENCE:** **Sr. Software Engineer – iOS Memories and Final Cut Pro Teams, Video Apps Division**  
*Apple Incorporated: Cupertino, CA* *January 2014 - May 2017*

- Responsible for engineering the movie editing user interface in the “Memories” feature in the iOS Photos application. The editing user interface enables users to customize the movies that iOS automatically curates from your most meaningful photos and videos.
- Communicated regularly with designers and testers to refine movie editing features.
- Received accolades for working through conflicts on the team.
- Implemented unit tests that flagged regressions as the movie-creation algorithm evolved.
- Contributed to performance regression tests to monitor trends in CPU and memory usage.
- Championed gathering aggregate usage statistics for iOS Memories features.
- Prototyped and developed other unreleased capabilities for the iOS Memories feature.
- Worked with designers, engineers, and testers to write specifications, prototype, and implement features for the role-based timeline in Final Cut Pro and iMovie for macOS.
- Periodically simplified the timeline’s architecture and APIs to reduce “technical debt.”
- Completed Stanford Machine Learning class through Coursera in January 2017.

**Sr. Applications Software Engineer – iBooks and iBooks Author Team, iWork Division**  
*Apple Incorporated: Cupertino, CA* *September 2010 - December 2013*

- Architected and implemented interactive, multitouch components featured in iBooks 2.0 for iOS, including interactive CoreData-based quizzes, movies, 3D objects, and more.
- Architected and implemented features in iBooks for macOS, including Night reading mode, support for asian text, and ePub3 background pagination and layout using WebKit.
- Implemented features for iBooks Author 2.0, including UI for editing MathML and LaTeX.
- Eliminated abandoned memory, optimized performance in iBooks on iOS and macOS.
- Prototyped and implemented interactive, gesture-based animations on iOS.
- Integrated SceneKit support for interactive 3D widget, and debugged OpenGL problems.
- Worked extensively with iOS team to integrate media player and solve playback issues.
- Aggressively managed bug queue and scrum team task backlog under fixed deadlines.

**User Interface Framework Engineer – Pro Applications Division**  
*Apple Incorporated: Cupertino, CA* *July 2005 - August 2010*

- Collaborated with designers and application engineers to implement and troubleshoot components of ProKit, a Cocoa user interface framework for Apple's Pro applications.
- Worked with OS teams such as AppKit and Xcode to evolve new features for ProKit’s use.
- Created prototypes that allowed designers to quickly converge on a “Pro” appearance for UI elements; prototypes used GLSL-like CIFilters that could be built into production code.
- Taught two-day Interface Builder training class for the ProApps design team.
- Delivered Interface Builder plugin features to streamline ProApps UI development.
- Encapsulated and augmented macOS “iLife” media browser for Aperture.
- Contributed to feature development in Aperture 1.0.

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## **Technical Lead – Media Fusion Project**

*Silicon Graphics, Incorporated (SGI): Mountain View, CA*

*2004 - 2005*

- Co-developed specifications for a software system for manipulating streams of live media content in a collaborative 3D virtual environment based on OpenGL Performer.

## **Technical Lead – Linux Release Team**

*Silicon Graphics, Incorporated (SGI): Mountain View, CA*

*Fall 2004*

- Successfully coordinated updates from five teams for a release of SGI ProPack for Linux.

## **Member of Technical Staff – Scalable Graphics Software Division**

*Silicon Graphics, Incorporated (SGI): Mountain View, CA*

*2000 - 2004*

- Designed, implemented, and fixed performance bottlenecks in components of OpenGL Multipipe, a multi-process, multi-GPU, C++ software layer that enabled OpenGL applications to scale graphics performance and screen resolution without modification.

## **Software Engineer (Co-op Internship)**

*NASA Jet Propulsion Laboratory: Pasadena, CA*

*Summer 1998, Fall 1997*

- Developed OpenGL Performer visualization software for Mars Rover Control Workstation.

## SKILLS:

- 12 years of Cocoa/Objective-C experience, 6 years native iOS development experience.
- Tuning mobile and desktop memory and CPU performance using Xcode and Instruments.
- Resolving graphics scalability bottlenecks, writing GLSL shaders, hand coding animations.
- Prototyping with CoreAnimation, Quartz Composer, and Photoshop.
- OpenGL, GLSL, C/C++, STL, PERL, HTML, CSS, Swift, XML, ePub3, JavaScript, Java.
- Cocoa specialties: AppKit & UIKit custom controls, gestures, and transition animations, event handling, CoreData, Bindings and Key-Value Observing (KVO).
- Objective-C specialties: Grand Central Dispatch (GCD), Automatic Resource Counting (ARC) and non-ARC memory management, blocks (closures), method replacement.
- Agile scrum development process.
- 3 years college coursework in spoken and written Japanese. Last visited Japan in 2005.

## EDUCATION:

### **Computer Science, Master of Engineering**

*Cornell University, Ithaca, NY*

*2000*

### **Computer Science, Bachelor of Science**

*Cornell University, Ithaca, NY*

*1999*

College of Engineering Dean's List

## AWARDS:

**U.S. Patent 9513883 B2** – Technique for UI element design and automated layout. *2016*

**U.S. Patent 8441499** – User interface contrast filter. *2013*

**U.S. Patent 7868893** – Integration of graphical content into another application. *2011*

**U.S. Patent 7140024** – Managing graphics applications across multiple GPUs. *2006*

**SGI Spirit Leadership Award** – Employee-nominated, awarded annually to 1% of employees. *2004*

**Boy Scout Eagle Award** *1995*

## INTERESTS:

International culture and foods, travel, origami, video games, singing, hiking.