

Sharon Minsuk

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<http://sharonminsuk.com/>

- Native iOS / Objective C development (6 years). Swift, C++.
 - Experienced with git and perforce.
 - Past web dev work (3+ years): JS/jQuery, CSS3/HTML5, PHP, MySQL; browser extensions.
 - Past work in assembly language (strong, 7 years).
 - Biosciences research with first-author research publications (16 years)
 - Ph.D. UC Berkeley, B.S. Stanford U.
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Experience

2022-present **Research Fellow, Biocomplexity Institute, Luddy School of Informatics, Computing, and Engineering, Indiana University, Bloomington**

- Investigating cell biomechanics in the development and maintenance of organismal form, using computer simulation. (Working remotely from California.)

2020-2022 **Career sabbatical: political activist / volunteer**

- 2022 candidate campaigns (progressive, non-corporate-funded candidates for Congress and CA State Assembly)
- Medicare For All / CalCare advocacy (National Nurses United)
- Election integrity (data team lead at SMART Elections)
- 2020 candidate campaigns (Bernie Sanders, several House candidates; GOTV for Presidential general election and Georgia Senate runoff elections)
- House district lobbying (Congressional liaison team, Progressive Democrats of America)
- BLM advocacy (Color of Change)

2019 **Senior Software Engineer, Medium**

- iOS development, mobile Core Experience team. Swift, Objective C, GraphQL/Apollo.

2015-2019 **Senior iOS Engineer, TiVo Corp.**

After the Rovi/TiVo merger:

- Developed features for the companion iOS app to the famed TiVo DVRs.
- Complex mix of Swift, C++, Objective C, and Haxe; Perforce.

At Rovi:

- Developed features for the Fan TV iOS app. TV and movie aggregation/discovery.
- Live TV and Video-on-Demand streaming.
- Native iOS/Objective C; git.

2012-2015 **Web and Mobile development, GREE International, Inc.**

Native iOS/Objective C:

- Developed features for GREE's popular game "Kingdom Age".
- Contributed features to our other flagship RPG games, "Modern War" and "Crime City".
- Refactored/rearchitected to create a shared core game engine for the three games.
- Extensive experience with git.

Web:

- Developed features for the HTML5 game NFL Shuffle. JS, PHP, CSS3 animations.

2010-2012 Front end / full stack web development, Kachingle

- Transformed our JavaScript/jQuery widget, eliminating numerous bugs to make the component vastly more robust and reliable in the face of the near-infinite number of environments in which it must run; designed and developed new features in both the front and back end (PHP); and made it work properly on mobile devices for the first time. This earned me "ownership" of that code.
- Introduced elements of CSS3 and HTML5 into the product where needed.
- Broke through a major conceptual barrier in the overall design of Kachingle's product, which was limiting our opportunities to expand our customer base. Then I implemented the solution, which required browser extensions, so I figured out how to write them for Firefox, Chrome, Safari, and Internet Explorer, using JavaScript and C++. This project inspired a major initiative involving the entire company and a new marketing campaign.
- Took on increased responsibility for the entire code base and more ambitious projects, including the website and the financial back end (PHP and MySQL).

2009-2010 Career transition projects

- Left academia to return to commercial software.
- Camera control module for microscopy image acquisition software (C++, Windows, Visual Studio).
- Self-taught C++, courses in C# and Java; Visual Studio, NetBeans, Xcode.

2007-2008 Adjunct Professor, Merritt College (Oakland, CA) and St. Mary's College (Moraga, CA)

- Courses taught: microscopy and digital imaging; general biology.

2004-2006 Biological computer simulation project, Konrad Lorenz Institute for Evolution and Cognition Research (KLI), Altenberg, Austria (postdoctoral fellow)

- Independent investigator: conducted original research, from conception through design and implementation. Developed innovative simulation for modeling cell biomechanics.
- Coded in C, Carbon API, Mac OS X, Xcode. Demo: <http://sharonminsuk.com/evodevosim>
- Won competitive KLI fellowship; published peer-reviewed research paper.

1989-2003 Biology research, including biological computer simulation project

1997-2003 Research postdoctoral fellow: Indiana U., Bloomington, Dept. of Biology

1989-1997 PhD student, then visiting researcher: UC Berkeley, Dept. of Molec. & Cell Biology

- Biological computer simulation project.
 - Coded in C, Unix on a Sun workstation.
 - Simulated biomechanical cell interactions during frog embryo development.
 - Contributed critical insight and momentum to flagging project, resulting in publication.
- Won competitive research grants (NIH, UC).
- Research publications: 6 as primary author, and several others as collaborator.
- Laboratory research in embryology/evolution; microsurgery, microscopy.

1985-1989 Clinical diagnostics software, Areca Science Corporation, Palo Alto, CA

- Software for use in sleep disorders clinics.
- Designed and implemented all parts of project (real-time collection of analog data, analysis of physiological episodes, user interface), in a 2-person development team.
- Coded in 6502 Assembly language, Pascal.

- 1982-1984 **Educational software, Teaching Tools Software, Inc., Mountain View, CA**
- Developed several products for pre-school and K-6 children for school and home.
 - Solely responsible for code design and implementation.
 - Team member for overall conceptual and GUI design, and product documentation.
 - Won *Learning Magazine's* 1983 Outstanding Software of the Year Award for "Square Pairs" (memory game, part of Scholastic, Inc. *Wizware* product line).
- 1982 **Educational software, Stanford University Mathematics Dept., Palo Alto, CA**
- "Newton's Method", dynamic graphics software for teaching calculus concepts.
- 1981 **Educational software, Indianapolis Children's Museum, Indianapolis, IN**
- "Vector Racing" and "Lunar Lander", interactive games for teaching concepts of vectors, velocity, and gravity to elementary and junior high school students.
- 1980 **Database software, Beckman Instruments, Bioproducts Dept., Palo Alto, CA**
- Database application for pharmaceutical research project to catalogue results of experiments on peptide structures.
 - Solely responsible for design and implementation.

Education

Ph.D. 1995, **University of California, Berkeley**, Molecular and Cell Biology

B.S. 1982, **Stanford University**, Biological Sciences

Foreign Languages: Though rusty, have been fluent in German, pretty good at French & Spanish