Leland J. Jefferis

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Education

University of Wisconsin - Madison
Ph.D. Mathematics, Adviser: Shi Jin *Sep. 2009 – May 2014*

Seattle University
B.S. Mathematics, Summa Cum Laude (GPA 3.97/4.00) *Sep. 2004 – May 2008*

Seattle University
B.S. Physics, Summa Cum Laude (GPA 3.97/4.00) *Sep. 2004 – May 2008*

Experience

Epic Systems
Software Developer Team Lead *Mar. 2016 – present*

I lead a team that develops advanced web apps, conducts dependency analysis, and performs long-term planning.

- Mentors team members and guides weekly meetings to discuss projects and progress.
- Created seminar focused on disseminating self-taught web-related knowledge through informal presentations.
- Organized a code dependency analysis effort to chart a course for future code releases.

Epic Systems
Software Developer *Feb. 2015 – Feb. 2016*

I worked collaboratively to develop advanced web apps within an advanced data binding web framework for use by radiologists in the clinical setting.

- Optimized a report look-up algorithm which resulted in a 20 fold performance increase and dramatic improvements to user experience.
- Developed scripting tools for calculating and visualizing code dependencies of a legacy code base for the purpose of devising long-term code migration strategies.
- Completed and managed 10 projects in parallel on aggressive timelines. Projects included writing detailed design documents and comprehensive unit tests.

Seventh Harmonic LLC
Cofounder and Programmer *Aug. 2013 – present*

- Produced "Bee-Line", an original puzzle game that currently has over 2000 users.
- Fabricated a custom game engine from scratch within the Android platform using Java and OpenGL.
- Worked with a legal team and UW – Madison business school to form an LLC and to conceive a marketing strategy.

University of Wisconsin - Madison
Research Assistant & Teaching Assistant *Sep. 2009 – May 2014*

- As a research assistant I researched and developed new numerical methods to simulate high frequency wave motion in hyperbolic PDE.
- Wrote and produced three research papers (published two) with adviser Shi Jin and presented them at numerous conferences.
- As a teaching assistant I taught undergraduate and graduate level mathematics courses as well as qualifying exam summer preparation classes.

Computer Skills

Primary Languages: C/C++, C#, Java **Scripting**: Bash, Emacs Lisp, AWK

Web Client: Javascript, JQuery, CSS/SCSS, AngularJS

Web Server: Node.js, ASP.NET, Liquid

Database: SQL, MUMPS

Editors: Emacs, Visual Studio, Android Studio

Other: Android, Matlab, OpenGL, Python, FORTRAN

Selected Open Source Projects

Katyedid's Kitchen: Built an HTTP server in C++ from scratch and used it to deploy a one page app style recipe management website (also built from scratch). The back-end is capable of data mining content from other recipe aggregators.

Photon counting: Researched and developed an asynchronous time-correlated single photon counting based auto-correlation algorithm in collaboration with Dr. Randall Goldsmith. The Matlab script implementation is competitive with commercial offerings and is freely available for researcher use.

Yasnippet Backsolve Emacs Extension: This project added "backsolve" functionality to Yasnippet, a popular snippet entry tool for the Emacs editor.

Tetromino 19: An optimized algorithm for tiling arbitrary regions with polyominos which is at the core of both a game and a collaborative art project with Awdience LLC.

Selected Awards

Goldwater Scholarship: The most prestigious undergraduate award given in the sciences and is awarded annually to about 300 students nationwide.

John Ju Award: Awarded to an exceptional student in the school of Science & Engineering at Seattle University. There have only been 9 recipients since its establishment in 1990.

John Nohel Prize: Awarded for outstanding dissertation in applied mathematics at UW - Madison.

Mathematical Sciences Postdoctoral Research Fellowship: An extremely competitive fellowship awarded by the National Science Foundation to applicants from a national pool. (declined)

Spoken Languages

English: Native

Mandarin Chinese: Conversational