

Lane Phillips

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Work Experience

2007-Present **Research Assistant**, University of Minnesota–Twin Cities

Developed a 3D visualization system with Medtronic for mapping and navigating the interior of the heart, using C++, OpenGL, and GLSL. Researched spatial perception in immersive virtual environments. Researched non-photorealistic rendering techniques using C++, OpenGL, and GLSL. Implemented a rendering system for a wall-sized multi-projector screen using C++ and OpenGL. Designed an iPad app to teach sketching for product design.

2006-Present **Independent Developer**, Minneapolis and Saint Paul, MN

Developed iOS applications and published 3 of them in the App Store. Developed AJAX web applications for personal use with PHP, SQL, XML, XSLT, and Javascript. Freelance iOS, Java, PHP, and Python programming.

2006-2007 **Teaching Assistant**, University of Minnesota–Twin Cities

Helped students on their C++ lab assignments. Maintained web pages for professors in the software engineering program.

2001-2004 **Software Engineer**, IBM, Rochester, MN

Served on the Java/400 team that implemented the Java virtual machine (JVM) on the IBM iSeries computer. Implemented the JVM Debugger Interface for the iSeries JVM in C++. Designed test cases for internationalization. Identified bugs in the just-in-time (JIT) compiler.

1999-2001, 2005-2006 **Software Engineer**, MetaLogic, Lincoln, NE

Implemented a database of social studies test questions to be used by state departments of education, using Java Swing, JDBC, and SQL. Implemented features for MetaCat, a web-based multimedia database, to allow educators to construct and administer standardized tests, using Java Server Pages, JDBC, and SQL.

Education

May 2012 (Expected) **PhD Candidate in Computer Science**, University of Minnesota–Twin Cities

Thesis: *Non-Photorealistic Immersive Virtual Environments for Architecture and Design*

2005 **MS in Computer Science**, University of Colorado–Boulder

Thesis: *Aqueduct: Robust and Efficient Code Propagation in Heterogeneous Wireless Sensor Networks*

2000 **BS in Computer Engineering**, University of Nebraska–Lincoln

Computer Skills

Java, 15 years. C/C++, 10 years. Python, 8 years. AJAX, 5 years. OpenGL and GLSL, 4 years.

Also familiar with SQL, PHP, HTML, and CSS. Strong understanding of object-oriented development.

Honors

Best Paper Award, 2010 Joint Virtual Reality Conference

National Merit Scholar

Tau Beta Pi Engineering Honorary

Pi Mu Epsilon Math Honorary

Dean's List in Engineering at UNL

Oarsman of the Year, UNL Rowing Team

Activities

Travel, Marathon training, Computer programming, Orienteering