

# Alex Kuhl

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## CONTACT INFORMATION

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<http://www.alexkuhl.org>

## INTERESTS

Graphics, HCI, Games, Visualization, Education, Security, Web

## EXPERIENCE

**Cincinnati Bell Technology Solutions - Cincinnati, OH** 09/2009–present  
*Security Administrator II*

- Lead web application penetration tester and security consultant
- Sole developer of a customer relationship management system written in **Django (Python)** as well as maintenance of related systems
- Lead creation of a client training program where talks are presented on-site to increase client awareness of software and web security vulnerabilities

**Signature Hardware - Erlanger, KY** 12/2004–04/2006  
*Technical Associate*

- Implemented **MS SQL Server** indexes that netted an 80% performance improvement while serving as a database administrator
- Created standards-compliant website using **PHP & MySQL**, implemented new customer-friendly features, and managed the hosting environment (**LAMP**).
- Identified and implemented open source technologies with company systems to improve performance and value

**ENTREPRENEURSHIP Vitruvian Design** 09/2011–present

*Co-founder - <http://www.vitruviandesign.com> - coming soon*

- Web design, programming, and hosting specializing in local businesses.

## FREELANCE AND CONSULTING

**Flourish Massage** 06/2011–present

*Web Developer - <http://www.flourishmassage.com>*

- Site updates and maintenance

**Signal US Interactive - Blue Ash, OH** 11/2010–02/2011

*Web Developer*

- **Django (Python)** and **JavaScript** web development

## TEACHING

**Northern Kentucky University** 08/2009–present

*Adjunct Faculty: Computer Science Dept.*

Introductory computer science and information technology courses including Elementary Programming (**Python**), Web Programming (**HTML5** and **JavaScript**) and PC & Networking Fundamentals.

**College of Mt. St. Joseph** 01/2010–05/2010

*Adjunct Faculty: Business and Computer Information Systems Dept.*

Databases course in MS SQL concentrating on theory, query syntax, and database design.

**Duke University TIP** 06/2007–08/2009

*Instructor: Programming for Video Games*

Designed and taught courses that teach programming and **Java** or **Python** through video game development aimed at gifted 6th grade and high school students

**North Carolina State University** 08/2006–05/2007

*Teaching Assistant: Applied Web Development*

Dynamic, standards-compliant web development (**PHP, HTML, CSS**) and database design/interaction (**MySQL**)

EDUCATION	<b>North Carolina State University</b> 12/2008 Master of Science in Computer Science, <b>GPA: 3.926</b> <i>Texture synthesis, representation and perception; high-resolution imagery</i> <b>Research Assistant for Web Programming (through 05/2009):</b> <ul style="list-style-type: none"><li>• Investigated and implemented existing synthesis algorithms using <b>Python</b> and <b>C++</b></li><li>• Investigated unique applications for synthesis tied to human visual perception</li></ul>
	<b>Northern Kentucky University</b> 05/2006 Bachelor of Science in Computer Science and Mathematics, <b>GPA: 3.777</b> <i>Honors List, Magna Cum Laude</i>
HONORS AND AWARDS	<b>Greg Mellen Memorial Cryptology Scholarship</b> , Cryptologia 2007 <b>College of Engineering Dean's Fellowship</b> , NCSU 2006-2007 <b>Dean's Scholarship</b> , Northern Kentucky University 2005-2006 <b>Sehnert-Pugh Scholarship</b> , Math and Comp. Sci. Dept., NKU 2004-2005 <b>Jeff Greene Scholar</b> , State of Kentucky 2002
PUBLICATIONS	<b>Measuring the Effect of Code Complexity on Static Analysis Results</b> James Walden, Adam Messer, Alex Kuhl. <i>ESSoS</i> . February. 2009. An investigation into the effectiveness of existing static source code analysis tools at correctly identifying known format string vulnerabilities.  <b>Rejewski's Catalog</b> Alex Kuhl. <i>Cryptologia</i> . Vol. 31 Issue 4, pages 326–331. 2007. A reconstruction and analysis of the lost catalog Rejewski used as an attack on the German Enigma before WWII.
PRESENTATIONS	<b>Rocket Puck on Ice</b> Alex Kuhl. <i>Northern Kentucky University Celebration of Research and Creativity</i> . Highland Heights, KY, USA. 04/2006. A <b>Java</b> GUI program for teaching introductory physics students about kinematic forces in a real-time, intuitive environment.  <b>Rejewski's Catalog</b> Alex Kuhl. <i>Mathematical Association of America - Kentucky Section Annual Meeting</i> . Centre College, Danville, KY, USA. 03/2006.
SKILLS	<ul style="list-style-type: none"><li>• Web technologies (<b>CSS, HTML, JavaScript &amp; AJAX, PHP</b>), frameworks (<b>jQuery, Django, MVC</b>), design, and standards-compliance</li><li>• Friendly personality with strong communication and leadership skills</li><li>• Excellent problem solving and math skills</li><li>• Proficient with variety of operating systems (e.g. <b>*nix, Windows</b>), programming languages (e.g. <b>C++, Java, Python</b>), and open standards (e.g. <b>OpenGL</b>)</li><li>• Proven commitment to successfully completing projects on time and on budget</li></ul>
PROFESSIONAL MEMBERSHIPS	Association of Computing Machinery (ACM) Since 2007 IEEE Computer Society 2007 American Mathematical Society 2007