

Matthew J. Nedrich

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Objective:

- Employment in software engineering

Education:

- **Master of Science - Computer Science and Engineering** *expected June 2011*
 - The Ohio State University, Columbus OH
 - GPA: 3.87 (4.00 scale)
- **Bachelor of Science - Computer Science and Engineering** *March 2009*
 - The Ohio State University, Columbus OH
 - GPA: 3.67 (4.00 scale)

Core Competencies:

- Java, C#, .NET Framework, Matlab, C/C++, PHP, MySQL, NASA World Wind
- Strong *Statistical* and *Machine Learning* skills (data classification, regression, clustering)
- Extensive domain knowledge in *Image and Video Processing*
- Rapid prototyping skills to convert research ideas into full-fledged software
- Team development using source control - SVN.
- Also experience with: ASP.Net, Android SDK, VB, CSS, databases, assembly

Work Experience:

Computer Vision Laboratory, The Ohio State University *Apr '09 – Current*
Graduate Research Associate

- **Distributed Camera Network Control**
 - Led design and development of software interface for large video camera networks
 - Developed in Java, built on NASA World Wind
 - Interfaced with numerous external plug-ins
 - Extended to integrate with Android phones
- **Video Analysis for Scene Entries and Exits Detection**
 - Analyze object tracking patterns to automatically detect semantic regions in video
 - Extended to learn occluded paths and analysis of path statistics for event detection
 - Developed in Matlab with large-scale data analysis
- **Mentored Undergraduate Students**

Computer Vision Laboratory, The Ohio State University *Mar '08 – Mar '09*
Undergraduate Researcher

- **Video Camera Web Server**
 - Developed multi-threaded functionality to control and stream video from analog cameras
 - Initial framework developed in Java, networked with graphics card using JNI
 - Built enhanced version in C# for multiple simultaneous camera streams using USB

Intel Corporation, Folsom CA *Jun '07 – Dec '07*
Software Development Intern

- **Circuit Marginality Validation**
 - Worked on the Infrastructure and Capabilities Development Team
 - Developed software to automate processor marginality validation

Townsend Technology Solutions, Hilliard OH *Jan '07 - Jun '07*
Software Development Intern

Volt Information Sciences *Aug '06 - Jun '07*
Technical Microsoft Student Partner

Misc personal projects written in PHP, Java, C#, and Matlab

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Publications and Technical Reports:

- **Learning Scene Entries and Exits using Coherent Motion Regions**
M. Nedrich and J. Davis
International Symposium on Visual Computing, November 2010.
- **Geo-registration and Interactive Control for Distributed Camera Networks**
M. Nedrich, K. Sankaranarayanan, and J. Davis
OSU Dept. Computer Science and Engineering Technical Report OSU-CISRC-6/10-TR13, 2010.

Activities and Interests:

- Android development
- Technical paper reviews for several computer vision conferences
- 2007-08 Undergrad representative on the Ohio State CSE Undergraduate Studies Committee
- 2007 Technical Microsoft student partner representative for Ohio State
- 2007 President of The Ohio State University's New Technology Special Interest Group (ntSig)
- Ohio State TerraAqua club member