

S. ANDREW SHEPPARD

Minneapolis, MN • USA
sheppard@umn.edu • +1 763.227.8106
www.andrewsheppard.net

EDUCATION

Ph.D., Computer Science (in progress)

University of Minnesota, Twin Cities, TBD

B.S., Information Technology Management

Minor in Business Management

University of Minnesota, Crookston, May 2005

Chancellors List (4.0 GPA), Fall 2003 - Fall 2004

Outstanding Achievement in Math & Physics, Fall 2003 - Spring 2004

A.A.S., Software Development

A.A.S., Web Design and Development

Anoka-Hennepin Technical College, Anoka, MN, May 2002

Dean's List (4.0 GPA), Fall 2000 - Spring 2002

QUALIFICATIONS & INTERESTS

I am interested in building rich Internet applications that support collaboration and decision-making among individuals with a common field of interest, differing goals, and varying levels of expertise. I generally create software using free and open-source libraries but also have experience working with proprietary systems.

Operating Systems

Android, GNU/Linux (esp. Debian & Ubuntu), Mac OS X, Microsoft Windows, Symbian (S60v3)

Programming and Markup Languages

ActionScript/MXML, C++, HTML/CSS/JavaScript, Java, Microsoft Visual Basic (6.0), Perl, PHP, Python, SQL (esp. PostgreSQL & MySQL variants), XML

Platforms and Libraries

Apache 2, BIND, Exim, Flex SDK, GDAL, MapServer, OpenLayers, PostGIS

Spoken Languages

English (native), Japanese (intermediate), Korean (beginning)

Coursework

Class projects in a variety of CS and business areas including project management, documentation standards, graphics & visualization, and network protocols (HTTP, TCP/IP).

RESEARCH & EXPERIENCE

As a part-time employee (since 2003) and graduate student (since 2005) at the University of Minnesota, I have developed and maintained a number of interesting production Internet applications. The major projects I've worked on each have a focus on sustainability and a considerable geographic component inherent to their respective domains.

River Watch Citizen Monitoring Program

<http://riverwatch.umn.edu>

International Water Institute (NDSU)

Northwest Minnesota Regional Sustainable Development Partnership (UMN)

Launched in 2006

Project Description

riverwatch.umn.edu is a custom water quality data management platform for River Watch participants in the Red River Valley. By providing tools to import, verify, analyze, and export data to/from Excel spreadsheets, the system simplifies the process of coalescing and interpreting field (and lab) data. The data tools are one part of a larger monitoring program that is being designed to serve as a model for the entire region.

Technologies Used

AJAX, Apache (CGI, mod_rewrite), Exim, MapServer, MySQL, OpenLayers, Perl (regular expressions, Spreadsheet::Read)

Role

I have been and currently am responsible for nearly all of the system design and implementation of riverwatch.umn.edu, with some guidance from Asst. Prof. David DeMuth. I have also been actively involved in making presentations and soliciting feedback from the users of the site. We follow a rapid-prototyping approach that allows us to work directly with the users to collaboratively refine the system and implement requested features.

Cyclopath Geowiki

<http://www.cyclopath.org>

GroupLens Research (University of Minnesota)

Launched in 2008

Project Description

Cyclopath is an open-source geographic wiki for cyclists in the Minneapolis-St. Paul seven county metropolitan area, allowing users to not only find personalized bike-friendly route directions but also to contribute their own knowledge by editing the map features directly. Cyclopath was built by a team of graduate students in the GroupLens Research lab led by Reid Priedhorsky under the supervision of Prof. Loren Terveen, and continues to be a valuable platform for conducting Computer-Supported Cooperative Work (CSCW) research. The Cyclopath team follows a relatively traditional development cycle, with clearly defined design, implementation, review, and release stages.

Technologies Used

Adobe Flex, Apache (mod_python), GDAL, MapServer, PostGIS, Custom WFS-like XML protocol

Role

As one of the initial developers of Cyclopath, my particular tasks included implementing a tagging infrastructure within the application; configuring MapServer and TileCache to create a WMS service for Cyclopath; and using GDAL and related tools to import and export a variety of GIS datasets for partners at the Metropolitan Council and to seed a new Cyclopath instance for Colorado. Since April 2010, I have been less active in the project with more of a guidance role.

Local Foods (.umn.edu)

<http://localfoods.umn.edu>

Regional Sustainable Development Partnerships (University of Minnesota)

Launched in 2005

Project Description

LocalFoods.umn.edu started as an online directory of local growers and processors in northwest Minnesota and soon expanded to cover much of the state. Not unlike certain popular social networking tools, members can modify their own pages with product lists, status updates, and photographs. As the site has grown, the scope has expanded to include a number of other resources, such as a directory of faculty and staff at the University of Minnesota with local foods expertise.

Technologies Used

Apache (CGI, mod_rewrite), BIND, MySQL, Perl (Image::Magick), Google Maps API

Role

I originally developed localfoods.umn.edu as part of an undergraduate work study project under the guidance of David DeMuth, by building on other web applications we had built. My more recent involvement with the website has included integrating GIS and graphic design work from other graduate students and staff.

LEADERSHIP ROLES

President, Multicultural-International Club

University of Minnesota, Crookston

Fall 2004 - Spring 2005

Officiated club meetings and organized trips and activities for one of the largest clubs on the UMC campus, consisting primarily of international students. Activities included a variety show we put on for the Crookston community.

REFERENCES

David DeMuth, Jr., Ph.D.

Associate Professor

Math, Science and Technology Department

University of Minnesota, Crookston, MN 56716

demuth@umn.edu - (218) 281-8259

<http://tools.crk.umn.edu/~demuth>

Linda Kingery, M.S.

Executive Director

Northwest Minnesota Regional Sustainable Development Partnership

University of Minnesota, Crookston, MN 56716

kinge002@umn.edu - (877) 854-7737

<http://www.regionalpartnerships.umn.edu/northwest>