John C. Earls
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EDUCATION

University of Illinois, Urbana-Champaign
Pursuing M.S. in Bioinformatics
Department of Computer Science (Anticipated Graduation Dec. 2010)
Current GPA 3.73

Illinois State University, Normal, IL
B.S. with honors in Computer Science
Dec. 2008
Awards:
- Distinguished Junior Award
- University Honors Scholar
- Departmental Honors Scholar

Major GPA 3.96; Overall GPA 3.88

ACTIVITIES

Honors Program/Grad Projects
Spring 2010 – I created an application that implemented relational algebra as a programming language.

Fall 2009 – I worked in a team developing software that learned the gene expression patterns of the a/v axis of drosophila using cis-regulatory modules.

Fall 2008 - I worked on an introductory paper describing Conditional Random Fields and their relationship to Natural Language Processing.

Spring 2008 - I wrote a program that used Bayesian learning to predict sea ice patterns at the North Pole. I presented my results at ISU's Annual Undergraduate Research Symposium.

Spring 2007 - I implemented a four state Markov Chain using C++, with an accompanying research paper discussing the discrete Markov Processes and modeling.

Fall 2006 - I wrote a research paper on the design and development processes of large corporations, using anecdotal evidence from systems analysts, project managers and systems engineers from State Farm, FedEx, EDS and Caterpillar.

RELEVANT WORK EXPERIENCE

Department of Computer Science, UIUC Urbana, IL 1/2009 – 5/2010
Instructor

I am currently instructing the summer session of CS 225 (Data Structures) at the U of I. I am in charge of administering and organizing the course, preparing and giving lectures, developing grading criteria and materials such as exams, machine problems and homework assignments. I lecture 6 hours a week to a class of 50 students.

Department of Computer Science, UIUC Urbana, IL 1/2009 – 5/2010

Teacher's Assistant

I assisted the instruction of CS 225, which is the undergraduate data structures and C++ course at the University of Illinois. I give weekly lectures on basic data structures and algorithms (linked lists, graphs, etc.) and provide the students with assistance debugging and conceptualizing their assignments. I implemented a program for the honors students where they enjoy a field trip to the National Center for Supercomputing Applications. As the senior TA, I am in charge of keeping the six other graduate teaching assistants and ten undergraduate lab assistants on task. I updated and maintained the grading scripts used by the 400 person course. As part of my general TA duties, I grade and assist in the preparation of exams, provide guidance to students during my weekly office hours and act as the primary email contact for students having issues with the course.

Student Affairs, ISU Normal, IL 8/2008-12/2008

Student Developer

I returned to Student Affairs to act as System Architect on an ambitious project to change the way that Student affairs managed its data and to prevent redundancy between its systems. I designed a system called CIRCL. It is a central repository for managing the information that is accumulated by the various departments of Student Affairs. The idea for it came from my recognition that the way we developed our applications, with each application being self contained, prevented us from taking advantage of the data stored in other applications.

Department of Geology-Geography, ISU Normal, IL 12/2007-12/2008

Programmer

I develop geoinformatic programs to assist in Dr. Budikova's research. One of my projects involved the acquisition of hundreds of NetCDF files from NOAA's website and the conversion of those files into MS Access databases. Those files contained daily data, from 1948-present, on various climatological variables. I was able to provide Dr. Budikova with over 300 Gb of data after parsing over a Tb of raw data.

Office of Residential Life, ISU Normal, IL 7/2006 - 12/2007

Student Developer Team Lead

I managed four student developers and their projects. I was involved in the hiring decisions and project management. I also created an interface to the Universities LDAP servers.
I developed a system that is used by University Housing to forward mail. It consists of a networked Java Desktop app, a web interface and an information server. I designed and developed web software used by residents to evaluate Resident Assistants.

TECHNICAL SKILLS

Programming Languages:

Python(*), PHP(*), ASP(*),Java(*), JavaScript(*), HTML(*), Coldfusion(*), SQL(*) XML(*), C, C++, ML, Prolog, Cobol, LaTeX, R

Development Applications:

SVN(*) (source control), git(*)(source control), MS Sourcesafe(*), MS Visio(*), MS Project(*), vim(*), Eclipse(*), Adobe Dreamweaver(*), emacs

Server Applications:

MS IIS(*), mySQL(*), MS SQL Server(*), Adobe Contribute Server(*), LDAP/ Active Directory (*), Joomla(*)(CMS), Mambo(*)(CMS), Apache

(*) = used professionally