



Positions Available Spring, 2009

Undergraduate Research Programmers
Laboratory for Knowledge Discovery in Databases

The KDD Lab in Computing and Information Sciences (CIS) at K-State is seeking undergraduate research programmers, for research projects in the areas of artificial intelligence and high-performance computing:

- Bioinformatics
- Biosecurity
- Computer and Information Security
- Data Mining and Information Extraction from Social Networks, Text, Web Documents, and Weblogs
- Graphics, User Interfaces, Visualization, Virtual Environments, Critiquing and Training Systems

Necessary Qualifications

- Proficiency with Java, C/C++, or C#
- CIS 200 and one of CIS 208 or CIS 300, or equivalent coursework and experience
- Ability to work 10-20 hours per week during the regular academic year

Ideal Qualifications

- One of CIS 301 (*Logical Foundations of Programming*), CIS 520 (*Operating Systems*), or equivalent coursework or background
- One of Stat 510 (*Introduction to Probability and Statistics*) or Math 510 (*Discrete Mathematics*)
- Experience with any of the following is a plus:
 - An integrated development environment (IDE) such as Eclipse or Visual C++/C#
 - A GUI development environment: Swing, SWT, Microsoft Foundation Classes (MFC), etc.
 - Database programming, especially ODBC or JDBC
 - Python or a server-side programming or scripting language (JSP, PHP, Perl), a functional programming language (Objective CAML, Standard ML, Scheme, LISP), or experience with expert system shells (CLIPS, JESS, etc.)
 - Introductory coursework in machine learning, knowledge-based expert systems, or DBMS
 - Previous work on group projects
- Ideal candidates will be able to start immediately and remain with the group for at least one year

Our computing environment comprises a number of high-end AMD Opteron, Pentium 4 Xeon, Sparc, PowerPC G4 workstations and Beowulf cluster nodes, running Linux (especially Gentoo, Ubuntu, and OpenSUSE), Windows Vista, Solaris, Mac OS 10 (10.3 Panther, 10.4 Tiger, and 10.5 Leopard).

Software components of our environment include IBM Eclipse, MS Visual Studio 2008, Borland JBuilder, Lisp, Scheme; graphics packages such as Alias|Wavefront Maya and Blender and libraries such as OpenGL and OGRE; various expert system shells and scripting languages; and a vast array of visualization and computational mathematics packages (MATLAB, Mathematica, SAS, SPSS, NeuroSolutions, etc.).

Our systems are connected by high-speed networks to the computing facilities of the National Center for Supercomputing Applications (NCSA), the leading-edge site for the National Computational Science Alliance.

The lab director is William H. Hsu (<http://www.cis.ksu.edu/~bhsu>).

Compensation starts at \$9 per hour with increases after 1-2 semesters, given satisfactory performance.

If interested, please send e-mail documenting:

- Computer Science, Physics, Engineering, and Math courses taken
- Names, e-mail addresses, and phone numbers of 3 references
- Overall GPA

to: bhsu@cis.ksu.edu

KDD Lab web site and current group members: <http://www.kddresearch.org>



--	--