GE GAO

Department of Computer Science   1-434-284-0223
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EDUCATION

Ph.D. program in Computer Science, currently enrolled, University of Virginia, Charlottesville, VA. GPA 3.9/4.0
Focus area: Software Engineering, Social Network Analysis. Advisor: Dr. Kevin Sullivan.

M.S. program in Computer Science, Sep. 2006 ~ Jun. 2008, Zhejiang University, China.   GPA 87/100
Focus area: Data Mining, Information Retrieval, Multimedia Database. Advisor: Dr. Gang Chen.

B.S. program in Computer Science, Sep. 2002 ~ Jun. 2006, Zhejiang University, China.   GPA 90/100

PROFESSIONAL EXPERIENCE

Department of Computer Science, University of Virginia   Aug. 2008-present
Research Assistant
- **Social Decision Networks in Software Engineering**
  - Proposed and developed a model of Social Decision Networks (SDNs) which formalizes how people in social networks perform collaborative decision making in software development.
  - Developed Web 2.0 based web services to support distributed social construction of SDNs and inference of coordination requirements of social networks for software quality improvement.
  - Part of IBM Open Collaborative Research program.
  - Technology used: RESTful web service, Javascript+Ajax (Dojo), Comet, Non-SQL database.
- **Grounding Socio-Technical Congruence in a Decision-Based Ontology**
  - Developed and recast theories of Socio-Technical Congruence in software ecosystems in terms of design decisions and dependencies.
  - Based on STC theories, developed organization coordination analytics on IBM Rational Jazz platform.
  - Technology used: IBM Rational Jazz platform, Eclipse Plug-in Development, EMF.
- **Wireless Sensors based Load Monitoring and Energy Conservation**
  - Proposed a wireless sensors based framework which monitors and reduces residential energy expenditure by monitoring and predicting occupancy patterns.
  - Technology used: Matlab, data mining.
- **Sieve: Simple Event Classification for Wireless Sensor Networks**
  - Proposed a system called Sieve that uses unsupervised learning to automatically identify recurring events in sensor streams.
  - Compared Sieve to conventional supervised learning and analyzed performance in terms of accuracy and system's scalability to multiple deployment scenarios.
  - Technology used: Matlab, decision tree, K-means, principal component analysis.

IBM T. J. Watson Research Center, New York   May 2010-Aug. 2010
Research Intern
- **Supporting Enterprise Stakeholders' Collaboration using Decision Space**
  - Studied the enterprise coordination patterns and state-of-art supporting facilities by interviewing a variety of technical and non-technical personnel.
  - Designed and developed a framework that provides supports for enterprise stakeholders' collaboration and coordination in software development process in the ontology of decision space.
  - Technology used: Restlet, Javascript+Ajax (Dojo), J2EE.

Department of Computer Science, Zhejiang University   Sep. 2006-Jun. 2008
Research Assistant
- **Motion Time Series Classification**
    - Proposed a classification model for multivariate motion time series, with application of data analysis and machine learning techniques to feature extraction and model training.
    - Conducted experiments to test the model performance and compare it with the state-of-art techniques.
    - Technology used: decision tree, neural networks, numerical analysis.

Selected Projects in Master Program
- *Software Engineering.* Developed a mobile application on *Android* platform that connects phone users to Weichi contest on KGS Go server and provides them intelligent move recommendation.
- *Operating System.* Optimized *Linux* scheduling algorithm to reduce cache coldness on multi-core systems.
- *Computer Architecture.* Simulated Simultaneous Multithreading Processor using SimpleScalar.
- *Compilers.* Built a BDC compiler using *Lex* and *Yacc*.

SELECTED PUBLICATIONS

Ge Gao, Kevin Sullivan. "Social Decision Networks in Software Engineering". 34th International Conference on Software Engineering. Zurich, Switzerland, Jun. 2012. (under review)

Ge Gao, Kamin Whitehouse. "The Self-Programming Thermostat: Optimizing Setback Schedules based on Home Occupancy Patterns". BuildSys '09, held in conjunction with ACM SenSys. Berkeley, CA, Nov. 2009.

Lidan Shou, **Ge Gao**, Gang Chen, Jinxiang Dong. "Classifying Motion Time Series Using Neural Networks". PCM 2006. Hangzhou, China, May 2006.

PROFESSIONAL SKILLS

- Programming language: C/C++(6+years), Java(5+years), 80x86 Assembly Language, Unix Shell.
- Web application development: HTML+CSS, Javascript, Ajax toolkit, RESTful web service, J2EE.
- Desktop application development: Eclipse plug-in development, IBM Rational Jazz, Matlab, Swing, MFC.
- Operating system: Android OS, Unix/Linux, Windows.
- Database: Non-SQL(CouchDB), DB2, MySQL.
- Development environment and tool: Eclipse, Visual Studio, Ant, Maven, Subversion, UML.
- Computer Science theories: data mining, machine learning, software design.

TEACHING EXPERIENCE

TA, University of Virginia
- Discrete Mathematics. Course discussion, student communication, evaluation.   *Autumn 2008*
- Theory of Computation. Project design, student communication, evaluation.   *Spring 2009*

REFERENCES

Available upon request.