

GE GAO

Department of Computer Science
University of Virginia
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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
Research Assistant

Aug. 2008-present

- *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 top of IBM Rational Jazz platform.
 - Technology used: IBM Rational Jazz platform, Eclipse Plug-in Development, Eclipse Modeling Framework.
- *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, Bayes classification, k-means, principal component analysis.

IBM T. J. Watson Research Center, New York
Research Intern

May 2010-Aug. 2010

- *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.

- *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

C/C++(6+years), Java(5+years), HTML+CSS, Javascript; experienced in RESTful web service, Ajax toolkit, J2EE, Android OS, Eclipse plug-in development, Ant, Maven, UML and Matlab; programming on Unix/Linux; familiar with data mining and machine learning techniques.

TEACHING EXPERIENCE

TA, University of Virginia

- Discrete Mathematics. Course discussion, student communication, evaluation.
- Theory of Computation. Project design, student communication, evaluation.

Autumn 2008

Spring 2009

REFERENCES

Available upon request.