

# Lei Shi

State Key Laboratory of Computer Science, Institute of Software, Chinese Academy of Sciences  
4# South 4th Street, Zhongguancun, Beijing, China 100080  
Email: shilei@ios.ac.com

## Research Interests

---

Machine Learning, Document Summarization, Recommender System, Short Text Understanding

## Education

---

**Institute of Software, Chinese Academy of Sciences, Beijing, China** Sep 2012 - Present

- PhD student in Computer Science
- work on automatic document summarization.

**Wuhan University, Wuhan, China** Sep 2008 - Jun 2012

- B.Eng. in Computer Science
- Thesis: Container Ship Stowage Plan Based on Multi-Strategy (Honored as the **Outstanding Bachelor Thesis in Hubei Province**)
- GPA: 90.7/100
- Rank 6/278

## Publications

---

1. Dilin Wang, **Lei Shi**, Jianwen Cao. Fast Algorithm for Approximate k-Nearest Neighbor Graph Construction. Data Mining in Networks workshop, ICDM 2013.
2. Wenbin Hu, Zhengbing Hu, **Lei Shi**, Peng Luo, Wei Song. Combinatorial Optimization and Strategy for Ship Stowage and Loading Schedule of Container Terminal. Journal of Computers, Vol 7, No 8(2012), 2078-2092
3. **Lei Shi**, Wenbin Hu, Zhengbing Hu, Bin Lu, Peng Luo. Ship Stowage Scheduling of Container Terminal by Combinatorial Optimization Algorithm and Strategy. The 3rd International Symposium of Information Engineering and Electronic Commerce, 2011.

## Research & Development Experience

---

**Institute of Software, Chinese Academy of Sciences** Sep 2012 - Present  
*Research Assistant* *Beijing, China*

- I mainly work on fast k-NN graph construction. k-NN graphs are widely used in several areas, such as data mining, machine learning and recommender systems. Our goal of this work is to generate k-NN graph with a high precision and reduced time cost.
- I also work on automatic document summarization.

**Microsoft Research Asia** Apr 2013 - Jan 2014  
*Research Intern* *Beijing, China*

- I am with the knowledge mining group, supervised by Dr. Shuming Shi. During the internship, I mainly focused on short text understanding. I have completed a research paper during the internship and the paper is under review now.

**STCA, Microsoft***Software Development Intern*

Nov 2011 - Apr 2012

*Beijing, China*

- I worked with the multimedia team, search technology center Asia (STCA), mentored by Dr. Litian Tao and Dr. Xin-jing Wang. During the internship, I focus on improving the search relevance of Bing in image verticle.

**School of Computer Science, Wuhan University***Research Assistant*

June 2010 - June 2012

*Wuhan, China*

- I worked with Prof. Wenbin Hu on self-adaptive and intelligent strategy for yard space plan under uncertainty. I mainly focused on the stowage plan which can be formalized as a combinatorial problem. Container classification algorithm and container stacking strategy are proposed, and group-based encoding genetic algorithm is used to solve this problem.

**Awards and Scholarships**

---

- Outstanding graduates of Wuhan University, 2012
- Outstanding Bachelor Thesis in Hubei Province, 2012
- National Scholarship, 2010
- Third prize of the 4th national information security competition, 2011
- Third prize of the mathematical modeling contest in central China, 2011
- Academic Excellence scholarship of Wuhan University, 2009-2011
- Merit Student of Wuhan University, 2009-2011

**Skills**

---

C, C++, C#, Java, Python, OpenGL, MySQL