JIANFENG CHEN

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Simplified models can be efficient & beautiful. Software systems should not be too complex. Future software engineers should reduce the system complexities by combining automated SE and machine learning.

EDUCATION

Doctor of Philosophy in Computer Science Aug 2014 - Dec 2018 (expected)
North Carolina State University, GPA: 3.97/4.0
Coursework: DevOps | Automated Software Engineering | Data Mining | Advanced AI | Algorithm Analysis

Bachelor of Engineering in Computer Science Sep 2010 - May 2014
Shandong University, China, GPA: 91.1/100
Coursework: Data Structure | OS | Networking | Compiling | Software Engineering | Database System

SKILLS AND STRENGTHS

Languages	***Proficient:*** Python | Java | LaTeX; ***Familiar:*** JavaScript | MatLab | SQL | C/C++
DevOps Tools	Jenkins, Ansible, Travis-CI, AWS Elasticsearch, S3, Docker
Others	Oracle DB, SAP Certificate, Node.js, Scikit-learn, jMetal

INTERNS AND PROJECTS

(Intern) Brahms Model Verification with Java Pathfinder platform May 2016 - Aug 2016
Intern in Google Summer of Code program 2016

· Accepted by Google `GSoC2016` program among 18,981 applicants **(accept rate: 6%)**.
· Basing on the `JPF` platform, found the most promising sub-state space in the NASA `Brahms` models.

Sampling vs. Searching in Search-based SE Dec 2014 - Present
NSF funded project in RAISE Lab

· Created a fast sampling technique to replace the common MOEA in Search-based Software Engineering.
· By combining SAT solvers with software product lines, found a way to configure large software systems **2000 times faster**.

LACE Data Privatization Tools and its Application Aug 2016 - Nov 2016
NSA funded project in RAISE Lab

· Implemented the Large-scale Assurance Confidential Environment (LACE) in python; released the code and documents to `python package index (pip)`.
· Applied LACE algorithm to remove the sensitive information while preserve the data pattern in business and medical data sets.

Continuous Integration/Delivery Pipeline Aug 2016 - Dec 2016
DevOps practice

· Basing on abstract syntax tree, created a test-suite generator to *only* test the diff between two commits.
· Integrated Ansible scripts, Redis, Docker and CI tools(Jenkins) to create a pipeline to build, test, analysis and deploy newly committed code.

PUBLICATIONS

[1] **Chen, J.**, Nair, V., Krishna, R., and Menzies, T.. Is "Sampling" better than "Evolution" for Search-based Software Engineering.arXiv preprint arXiv:1608.07617 (2016).

[2] Nair, V., Menzies, T., and **Chen, J.**. An (accidental) exploration of alternatives to evolutionary algorithms for SBSE. International Symposium on Search Based Software Engineering, 2016.

[3] Yang, Y., Zeng, W., and **Chen, J.**. Equiareal parameterizations of NURBS surfaces. Graphical Models 76.1 (2014): 43-55.