

JIANFENG CHEN

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Simplified models are efficient & beautiful. I believe the future of SE lies in simplifying complex software systems using 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 L ^A T _E X; 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

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- [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.