

Tianpei Xia

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EDUCATION

- North Carolina State University**, Raleigh, NC Aug. 2016 - Dec. 2020
Ph.D. in Computer Science | Adviser: Dr. Tim Menzies
- The University of Texas at Dallas**, Richardson, TX Aug. 2013 - Dec. 2015
M.S. in Computer Science
- Nanjing University of Posts and Telecom.**, Nanjing, China Sep. 2009 - Jun. 2013
B.S. in Electrical Engineering

SKILLS AND INTERESTS

- Experience in Machine Learning, Software Analytics, Hyperparameter Optimization, MySQL and Web Programming.
- Proficient in *Python*, familiar with *Java*, *PHP*, *HTML5*, *Matlab* and *R*, good at ML frameworks: Scikit-learn, Tensorflow.
- Interested in backend/infrastructure development as well as machine learning, text mining, and research positions.

SELECTED PROJECTS

NSF Funded: Search-based Software Engineering Research Sep, 2017 - Present
Research Assistant Under Dr. Tim Menzies, North Carolina State University, USA

- **Hyperparameter Optimization for Software Analytics:** Software analytics has been widely used in software engineering for many tasks such as generating effort estimates for software projects. One of the “black arts” of software analytics is tuning the parameters controlling predicting algorithms. Such hyperparameter optimization has been widely studied in some software analytics domains. We try to seek simple, automatic, effective and fast methods for finding hyperparameter options for automatic software effort estimation.
- **Scalable Holistic Autotuning for Software Analytics (SHASA):** SHASA tunes all levels of options for multiple optimization objectives at the same time. It achieves this ambitious goal through the development of a set of novel techniques that efficiently handle the tremendous tuning space. These techniques take advantage of the synergies between all those options and goals by exploiting relevancy filtering, locality of inference and redundancy reduction.

Design, develop, and test a Laboratory Management System Aug, 2016 - Dec, 2016
Graduate Course Project, North Carolina State University, USA

- **Database Design:** Design, develop, and test ABC Laboratory Management System that supports people to do experiments, workshops and financial transaction based on combined database. The project is in four parts: conceptual design and requirements analysis (Phase I), database design requirements (Phase II), normalization (Phase III), and final demonstration (Phase IV).

ACADEMIC EXPERIENCE

Teaching Assistant | NC State, Raleigh, NC

- CSC540 Database Management Concepts and Systems Aug. 2016 - Dec. 2016
- CSC226 Discrete Mathematics for Computer Scientists Jan. 2017 - May. 2017
- CSC236 Concepts and Facilities of Operating Systems Aug. 2017 - Dec. 2017
- CSC495 Programming Languages Modeling Jan. 2018 - May. 2018

SELECTED PUBLICATIONS

- **Tianpei Xia**, Rahul Krishna, Jianfeng Chen, George Mathew, Xipeng Shen, Tim Menzies, *Hyperparameter Optimization for Effort Estimation*. **EMSE(Under Review)**, 2018. 📄→ tiny.cc/txiaHyper.