jianhais@outlook.com
www.linkedin.com/in/jianhaisu

Jianhai Su

Phone: 803-381-1581
oceank.github.io

Skill Set

- **Programming Languages**: C++, Java, Python, Bash, Perl, SQL
- **Python Learning Library**: Tensorflow, Keras, PyTorch, BoTorch
- **Tools**: Git, Docker, Visual Studio, Eclipse, Jenkins, JIRA, Bamboo
- **Machine Learning:** adversarial machine learning, reinforcement learning, transfer learning, Bayesian optimization
- **Database**: Memcached, Redis, Riak, PostgreSQL
- **Cloud Platform**: AWS, Google Cloud Platform
- **Robotics**: Gazebo, ROS

Work Experience

Software Engineer II

- **Synopsys**, Seattle, WA, USA — Worked in Language Frontier Team — Feb. 2016 ~ June 2017
  - Enabled Synopsys' static analysis product, Coverity, to cover JavaScript ES 6 and Swift 3 by translating their abstract syntax trees into a unified structure accordingly. (**C++/Linux**)
  - Implemented a SpiderMonkey-based minification detection to sort out minified JavaScript files. (**C++/Linux**)
  - Developed a jHighlight-based syntax highlighter to enhance readability of Swift 3 code in UI. (**Java/Linux**)

Software Engineer

- **McAfee (Intel Security)**, Denver, CO, USA — Worked in SaaS Email Protection Team — July 2014 ~ Jan. 2016
  - Worked with QA leader to write test plans for new features for SaaS Email Protection product (sold to ProofPoint).
  - Developed front-end and back-end test automation for features and hot fixes. (**Perl/Python/Linux/WebDriver**)
  - Participated code review and fixed bugs for mail transportation agent. (**C++/Linux/ Memcached/Redis/Riak/SMTP**)
  - Set up a testing infrastructure and worked with DevOps to deploy puppet modules into production. (**Linux/PostgreSQL**)

Research Experience

- University of South Carolina, Columbia, SC, USA — Working with Dr. Pooyan Jamshidi — Jan. 2019 ~ Present
  - Applied **Bayesian optimization** and **Deep Reinforcement Learning** to obtain optimal configurations for robot to adapt to environmental and internal changes. (**Python/Linux/Docker/BoTorch/Tensforflow**)
  - Created a many-weak-defense based framework to fight **against adversarial examples** (**Python/Keras/CleverHans**)
- University of South Carolina, Columbia, SC, USA — Worked with Dr. Qiang Zeng — Aug. 2018 ~ Dec. 2018
  - Built a system to detect audio adversarial examples based on similarity dispersion of its transcriptions recognized among different automatic speech recognition systems. (**Python/Linux**)
- Michigan Technological University, Houghton, MI, USA — Worked with Dr. Timothy Havens — Sept. 2012 ~ April 2014
  - Proposed several heuristic algorithms for **fuzzy community detection** by applying **convex optimization**, **fuzzy k-mean clustering** and **genetic algorithm** to maximize modularity of found partition. (**MATLAB/C++**)

Education

- PhD in Computer Science at University of South Carolina, Columbia, SC, USA — Aug. 2018 ~ Present
- M.S. in Computer Science at Michigan Technological University, Houghton, MI, USA — Sept. 2011 ~ May 2014
- M. Eng. in Software Engineering at Tongji University, Shanghai, China — Sept. 2008 ~ June 2011
- B.S. in Information Science (**Honor Program**) at China Agricultural University, Beijing, China — Sept. 2005 ~ June 2008

Publications

- Md Shahriar Iqbal, Jianhai Su, Lars Kotthoff, Pooyan Jamshidi. "FlexiBO: Cost-Aware Multi-Objective Optimization of Deep Neural Networks". CoRR abs/2001.06588 (2020).
- Ying Meng, Jianhai Su, Jason O'Kane, Pooyan Jamshidi. "Ensembles of Many Diverse Weak Defenses can be Strong: Defending Deep Neural Networks Against Adversarial Attacks". CoRR abs/2001.00308 (2020).
- Qiang Zeng, Jianhai Su, Chenglong Fu, Golam Kayas, Lannan Luo, Xiaojiang Du, Chiu Chiang Tan, Jie Wu. "A Multiversion Programming Inspired Approach to Detecting Audio Adversarial Examples". DSN 2019: 39-51.
- Jianhai Su, Timothy Havens. "Quadratic Program-Based Modularity Maximization for Fuzzy Community Detection in Social Networks". IEEE Transaction on Fuzzy Systems, Vol. PP, Iss. 99, pp. 1-1, DOI: 10.1109/TFUZZ.2014.2360723.