Shuo Yang

952-297-6289 | imsure95@gmail.com | imsure.github.io | imsure | shuo-yang-12ab7047

Education

University of Arizona — *Tucson, Arizona USA*

M.S. in Computer Science, GPA: 3.18 — *Aug. 2014 - May. 2017*

University of St. Thomas — *St. Paul, Minnesota USA*

M.S. in Software Engineering, GPA: 3.8 — *Aug. 2011 - May. 2014*

Harbin Institute of Technology — *Harbin, Heilongjiang China*

B.E. in Electrical Engineering — *Aug. 2004 - May. 2008*

Skills

Languages	Python, C/C++, Java, SQL, Bash
Data/Databases	MySQL, PostgreSQL, Redis, SQLite, Hive, Pandas
Platforms/Libraries	Django, Django Rest Framework, Celery, Hadoop, Giraph, Pthreads, MPI
Tools	Git, LaTeX, Emacs, IntelliJ, Vagrant, Puppet, Chef, Jupyter Notebook

Experience

DiDi Research America, LLC. — *Mountain View, CA, USA*

Software Engineer — *Oct. 2018 - Present*

- Develop and deploy tools and pipeline in the area of intelligent driving on vehicles to improve the driving quality and make it smarter and safer.
- Research and implement the state of the art algorithms, adapt them into driving scenarios and make it running real-time on cars.
- Collaborate with third-party car companies and other groups to deliver the intelligent vehicles.
- Contribute to Company's intellectual property through patent filing.

Metropia, Inc. — *Tucson, Arizona USA*

Software Engineer — *Dec. 2017 - Oct. 2018*

- Work closely with data science team to transform research prototypes into production level code.
- Design and build the scalable backend system that provides end users with real time and predictive multi-modal travel options via web API. Main stack: Python 3, PostgreSQL, Sklearn, Django, Django Rest Framework, Redis, Celery and Pytest.
- Scale out existing systems to handle high loads.
- Deploy and monitor backend services on AWS.

University of Arizona — *Tucson, Arizona USA*

Research Assistant for ANTARES project — *Aug. 2014 - Aug. 2015, Aug. 2016 - Mar. 2017*

- Designed and implemented Python API for astronomical alert data manipulation, using MySQL as DB backend.
- Built the provenance data view system using Django and MySQL.
- Worked on various components of ANTARES system, including data injection, alert simulator and alert packet format specification.
- Managed the dedicated CentOS cluster; designed and built the autoconfiguration and bootstrap system using Puppet and Vagrant.

University of Arizona — *Tucson, Arizona USA*

Teaching Assistant for CS460: Database Systems — *Fall 2015 & Spring 2016*

- Created solutions for programming and written assignments.
- Created tutorials and demo for the final course project "Database-driven Web Application" using Oracle, Tomcat and JSP, mentored project teams.

University of St. Thomas — *St. Paul, Minnesota USA*

Research Assistant for Neural Modeling in Hadoop project — *Aug. 2013 - May. 2014*

- Developed a new design pattern for graph algorithms in MapReduce and implemented a large scale neural network model in MapReduce.
- Re-implemented the model with a vertex-centric approach using Apache Giraph and resulted in 60% performance improvement.
- Published (Link to paper) and presented (link to slides) a paper as first author in an IEEE regional conference.

Danfoss Power Solutions — *Plymouth, Minnesota USA*

Software Engineer Intern — *June. 2012 - May. 2013*

- Migrated the legacy software (written in C) to the new hardware platform with other team members and conducted unit testing.
- Improved overall software quality using static code analyzer FlexeLint, identified and corrected several vulnerabilities existed in the legacy code.
- Built a tool (in Python) for summarizing, indexing and querying large volume of warning messages produced by FlexeLint.

Beijing Farsight Technology and Information *Beijing, China*

Embedded Software Engineer & Training Assistant *July. 2009 - July. 2011*

- Developed Linux device drivers and applications (in C) for various ARM platforms (ARM 9, 11 & Cortex-A8).
- Prepared training materials and instructed trainees in their lab sessions and final design project.

Platomix Technologies. (Start-up company) *Beijing, China*

Software Engineer *Feb. 2009 - July. 2009*

- Joined the team that built the initial prototype for Samsung's Remote Test Lab (RTL).
- Developed a multi-threaded program (in C++) for RTL device (Linux smartphone) to handle requests from RTL clients.

Publication

Yang S, Spielman ND, Jackson JC, Rubin BS. Large-scale neural modeling in MapReduce and Giraph. In IEEE International Conference on Electro Information Technology. IEEE Computer Society. 2014. p. 556-561. 6871824. Available from, DOI: 10.1109/EIT.2014.6871824

Narayan, G, Zaidi, T, Soraisam, MD, Wang, Z, Lochner, M, Matheson, T, Saha, A, **Yang, S**, Zhao, Z, Kececioglu, JD, Scheidegger, CE, Snodgrass, RT, Axelrod, T, Jenness, T, Maier, RS, Ridgway, ST, Seaman, RL, Evans, EM, Singh, N, Taylor, C, Toeniskoetter, J, Welch, E & Zhu, S 2018, 'Machine-learning-based Brokers for Real-time Classification of the LSST Alert Stream' Astrophysical Journal, Supplement Series, vol. 236, no. 1, 9. https://doi.org/10.3847/1538-4365/aab781