

Shichu (Stuart) Zhu

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Objective: Software development engineer full-time position, Graduation Dec 2019.

Education

- **University of Illinois at Urbana-Champaign** **Urbana, IL, US**
Computer Science, Professional MS August 2018–Expected December 2019
- **University of Illinois at Urbana-Champaign** **Urbana, IL, US**
Atmospheric Science, MS August 2014–August 2018
- **Peking University** **Beijing, China**
Atmospheric and Oceanic Sciences, BS September 2010–July 2014
School of Physics, G.P.A. Major 3.70/4.0, Overall 3.52/4.0

Experience

- **Google** **Mountain View, CA, USA**
Software Engineer Technical Infrastructure Intern, Google Photo team Expected May 2019–August 2019
(Tentative) Develop an RPC record-and-replay framework for backend database debugging.
- **University of Illinois** **Urbana, IL, USA**
Teaching Assistant, Dept of Computer Science, CS 411 Database Systems. August 2018–Present
Design homework questions (SQL query, ER diagrams), present tutorial lecture on web programming with DBMS.
- *Full-Stack Software Developer, DataSpread Group: dataspread.github.io, Prof. Aditya Parameswaran* Summer 2018
Mainly developed in java/javascript with the Spring framework; Designed and developed the navigation browsing component, integrating front-end design and back-end database algorithm support; Achievements included augmenting ZK-SpreadSheet's formula execution engine and using complex data structures such as B-Tree.
- *Research Assistant, Dept of Atmospheric Science, Prof. Greg McFarquhar* 2014–2017
 - NSF-funded research project to understand formation of ice clouds based on observed ice particle images.
 - Used **MATLAB** programs to process the particle images, extract dimensional information and estimate their size distributions.
 - Statistically analyzed and visualized the distributions and their derived properties to draw scientific conclusions. The analysis was largely done in **Python** (Scipy/Pandas/Matplotlib). Sample jupyter notebooks available at github.com/shichuzhu/atmos-research.
 - Results presented at American Geophysical Union Fall Meeting in Dec 2016.
- **California Institute of Technology** **Pasadena, CA, USA**
Visiting Undergraduate Researcher, Dept of Planetary Science Summer 2013
Numerical simulation of the weather layer of Jupiter's atmosphere using GFDL's shallow water model. Original model and tuning are coded in **FORTRAN**.

Projects

- *Course project, Distributed Systems, <https://github.com/shichuzhu/sds>* Fall 2018
An simple distributed system built from scratch using **Golang**. It includes a ping-ack SWIM failure detector, a reliable distributed file system with replica control, and a stream-processing engine with a naive scheduler.
- *Course project, Data Structures Honor Section, github.com/shichuzhu/text_adventure_game* Fall 2017
A simple terminal text adventure game built under functional programming paradigm in **Clojure**.

Courses

- **Theory:** Algorithms and Data Structures, Applied Numerical Methods [A+], Introduction to Computation [A+], Introduction to Data Mining, Artificial Intelligence, Linear Algebra, Probability and Statistics.
- **System:** Advanced Computer Networks, Applied Cloud Computing (Python), Communication Networks (C++), Computer System Organization, Database Systems, Distributed Systems (Python, Go)[A+], Introduction to Computer Security, Programming Languages (Haskell), System Programming (C).

Programming Skills

- **Proficient in:** C++, Java, Python.
- **Familiar with:** C, Clojure, FORTRAN, Go, Haskell, MATLAB, SQL, \LaTeX , javascript.
- **Frameworks & Tools:** React, gRPC, Django, Jupyter notebook, Node.js, Spring.
- **Programming Contests:** Illinois Programming League (IPL) Rank 5 (Season 3), Rank 9 (Season 2).