Shichu (Stuart) Zhu

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Education

- **University of Illinois at Urbana-Champaign** — **Urbana, IL, US**
  Computer Science, MS — *August 2018–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** — **Cambridge, MA, USA**
  Software Engineer, Google Cloud — *February 2020–Present*
  Develop network management tool using Golang.
- **Google** — **Mountain View, CA, USA**
  Software Engineer Intern, Photos-iOS EngProd team — *May 2019–August 2019*
  Develop an Objective-C tool serving recorded photos and other types of protobuf objects to parameterize unit tests of the Photos-iOS app and improve test coverage.
  Create a debug-only UI feature in Photos-iOS app to record production protobuf from a testing account.
- **University of Illinois** — **Urbana, IL, USA**
  Teaching Assistant, Computer Science, CS 411 Database Systems, CS 425 Distributed 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:** Go, Python.
- **Familiar with:** C, C++, Java, Clojure, FORTRAN, Haskell, MATLAB, Objective-C, SQL, LaTeX, javascript.