Shichu (Stuart) Zhu

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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

- **University of Illinois** — **Urbana, IL, USA**
  Teaching Assistant, Dept of Computer Science — *August 2018–Present*
  CS 411 Database Systems. Design homework questions (SQL query, ER diagrams), present tutorial lecture on web programming with DBMS.
- *Software developer, DataSpread Group:* *dataspread.github.io* — *Summer 2018*
  A full-stack developing experience with more emphasis on the back-end. 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* — *2014–2017*
  NSF–funded research project. Programmingly involved developing numerical and image processing algorithms in MATLAB, data analysis and visualization in Python (Scipy/Pandas/Matplotlib).
- **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.
- **Peking University** — **Beijing, China**
  Undergraduate Researcher, Dept of Atmospheric and Oceanic Sciences — *2013–2014*
  A survey and comparison of existing numerical advection schemes in solving 1-D advection equation. Implemented in FORTRAN.

Projects

- *Course project, Distributed System* — *Fall 2017*
  `gitlab-beta.engr.illinois.edu/szhu28/ShichuCS425MP` Implemented a gossip-style failure detector for a distributed system connected by arbitrary network topology. Programming techniques included building a utility RPC module with socket and decorator in Python.
- *Course project, Data Structures Honor Section* — *Fall 2017*
  `github.com/shichuzhu/text_adventure_game` A simple terminal text adventure game built under functional programming paradigm in Clojure.

Courses

- **Taken (grade):** Algorithms and Data Structures (B), Applied Numerical Methods (A+), Calculus (A), Introduction to Computation (A+), Linear Algebra (A), Probability and Statistics (B),
- **Audited (Programming language used):** Algorithms, Applied Cloud Computing (Python), Communication Networks (C++), Database Systems, Distributed Systems (Python, Go), System Programming (C).

Programming Skills

- **Proficient in:** C++, Java, Python.
- **Familiar with:** C, Clojure, FORTRAN, Go, Haskell, MATLAB, SQL, LaTeX, javascript.
- **Frameworks:** React, gRPC, Django, Node.js, Spring.