

# Sean Shahkarami

sean.shahkarami@gmail.com | seanshahkarami.github.io

## Skills

Python, Go, Bash, PyTorch, Scikit-learn, Pandas, Numpy, Scipy, Linux, Docker, C/C++, SQL, Git

## Experience

### **Waggle / Sage / Array of Things Developer | Argonne National Lab | Since January 2016**

- Building AI/ML cyberinfrastructure for future scientific applications at the edge.
- Developed data pipeline which compiles ~300GBs of data nightly used by clients.
- Developed our main platform libraries in Python and C++.
- Designed and developed development toolchain used by clients.
- Developed Docker-based OS build system significantly reducing build complexity and times.
- Developed firmware for our system critical embedded WagMan board.
- Developed interactive QA process used by our manufacturing partners and technicians.
- Performed data wrangling and analysis of our management data and sensor data.
- Advised team on deploying CA based SSH system for device auth and registration.
- Guided summer interns through the design, implementation and integration of software tools.

### **Math and Computer Science Intern | Argonne National Lab | Summer 2015**

- Implemented code and tools for large scale watershed simulation in C using PETSc.
- Provided background knowledge of hyperbolic PDEs and fluid mechanics.

### **Computational Bootcamp Instructor | UIUC - Summer 2015.**

- Developed curriculum for and taught two week intensive crash course in scientific computing.
- Material is available here: <https://faculty.math.illinois.edu/~shahkar2/cbmng/>

## Education

- Progress towards Ph.D in Mathematics, 2011-2016, UIUC
- M.S. in Mathematics, 2011-2013, UIUC
- B.A. in Mathematics with Minor in Computer Science, 2007-2011, UIUC