

Zachariah Watt

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Education

Iowa State University Graduated Spring 2020
BS in Computer Science with a minor in Chinese Studies
Lanzhou Jiaotong University (*study abroad on department scholarship*) 2017 – 2018
HSK (*Chinese Proficiency Test*): **5** (of 6)

Work

Student Developer: Iowa State University ABE Department 2015 – 2016

- ▶ Worked on behalf of Table2Table, a food rescue organization in Iowa City
- ▶ Developed mobile app and server to collect and store data from pickup routes
- ▶ Android client, Java server, Postgres database

Student Assistant: Iowa State University Library 2014 – 2020

- ▶ Sorted, organized, located, and refiled items in microform and general collections
- ▶ Demonstrated use of various archival machines to patrons
- ▶ Assisted patrons in the location of materials in open and closed collections
- ▶ Audited, located, and re-filed materials under multiple arcane catalog schemes

Projects

terrainHydrology (Python, C++, OpenMP)

- ▶ Procedural terrain generator
- ▶ Parallel execution using OpenMP
- ▶ Automated tests for C++ module using GoogleTest

infinite-monsters (Java, JavaScript, SQL)

- ▶ Multiplayer, RPG-style, browser-based game engine build for a class
- ▶ Lead developer and architect within small group
- ▶ CI/CD with GitLab runners
- ▶ Game map stored in SQL database

parallel-world (C++, OpenMP)

- ▶ Generates terrain over planetary surfaces
- ▶ Deployed on high-performance computing cluster
- ▶ Parallel execution using OpenMP
- ▶ Profiled and optimized using Allinea DDT

mandarin-annotator (JavaScript, Electron, SQLite)

- ▶ Annotates Mandarin-language texts with editable dictionary definitions
- ▶ SQLite dictionary

Skills

Programming Languages:
Java, C/C++, Python, JavaScript, C#, Fortran, Bash, Liquid

Systems, Tools, Frameworks, & Environments:
MySQL, SQLite, googletest, Git, Linux, Allinea DDT, React, pfSense, LaTeX, MediaWiki, Make, kdenlive, Audacity, MLT Framework, ffmpeg

Activities

Beta Sigma Psi (Commissary) Spring 2017

- ▶ Responsible for maintenance of kitchen and dining facilities
- ▶ Scheduled, managed, and disciplined workforce of 50 men
- ▶ Developed custom software to generate schedules

Cyber Defense Competition (Blue Team, Green Team) 2015 – 2020

- ▶ Won 4th place on blue team (Fall 2018)
- ▶ Volunteered for green team for most of 2018–2020
- ▶ Maintained web applications and network infrastructure in a realistic environment

Chinese Language Club (Exec Board) 2018 – 2020

- ▶ Planned and executed club events with other exec board members

Linux Club (Member) 2018 – 2020

- ▶ Gave lecture on installation and maintenance of MediaWiki