

SOFTWARE ENGINEERING INTERNSHIP QUALIFICATIONS

- **Programming Languages:** Proficient in Java, Python, HTML/CSS/Javascript, C, Wolfram Language/Mathematica; knowledge of Assembly, Scheme, PHP, Prolog, Matlab/Octave, Ruby
- **Programming Tools:** Proficient with Git/GitHub/Bitbucket, Bash shell/scripting, Heroku, MongoDB, Sublime Text, Markdown; knowledge of SQL, reStructuredText, Mercurial, Evothings, Continuous Integration, Vim, Emacs
- Broad understanding of an array of topics in Computer Science, from artificial intelligence and machine learning to natural language processing, data science and theory
- Proven independent initiative and problem solving skills demonstrated through completion of nine Coursera courses and many independent projects
- Confident communicator with clear speaking and listening abilities, enhanced through public speaking courses, nonviolent communication training, and peer facilitation

EDUCATION

University of Rochester, Bachelor of Science in Computer Science, Rochester, NY (Expected May 2017)

- GPA 4.0 (Awarded Dean's List every semester)
- *Current Courses:* Advanced Algorithms, Computer Organization
- *Past Computer Science Courses:* Design and Analysis of Efficient Algorithms, Logical Foundations of Artificial Intelligence, Introduction to Artificial Intelligence, Computer Models and Limitations, Undergraduate Problem Seminar, Computation and Formal Systems, Science of Data Structures
- *Past Mathematics Courses:* Honors Calculus III and IV (includes Linear Algebra and Differential Equations)

SOFTWARE DEVELOPMENT EXPERIENCE

Software Entrepreneurship Intern, Fitruvia Movement Analysis Systems, Rochester, NY (Summer 2014)

- Using Javascript, designed a full-body wearable technology system to give athletes real-time feedback on their body movements, using state-of-the-art heuristic methods and mathematical models
- Created extensive documentation and a number of tutorials to ease the transition for future developers
- Collaborated with other engineering and business interns to help attract venture capitalists and consumers

Lab Manager, Computation and Language Lab, University of Rochester, Rochester, NY (Summer 2014)

- Extended the functionality and documentation of LOTlib, a Python library for simulating experimental data on "Language of Thought"
- Created HTML documentation for LOTlib using Sphinx and designed unit testing framework for LOTlib using unittest
- Helped set up various laboratory equipment, including five workstations running Ubuntu 14.04

RESEARCH EXPERIENCE

Undergraduate Research Assistant, TwitterHealth Research Group, University of Rochester, Rochester, NY (Fall 2014-present)

- Currently designing a word model that can predict and identify social media users susceptible to mental illnesses
- Using Python's BeautifulSoup library, designed a web scraper to extract information about thousands of individuals

SELECTED PROJECTS

- **The Unsolved Problems Database** – created website using HTML/CSS/JS with NodeJS and MongoDB as a resource for people to learn about, create, discuss, and solve unsolved problems.
Website: unsolveddatabase.org; code at github.com/jthurst3/unsolveddatabase
- **Computer Music** – created Mathematica code to output short musical compositions with use of genetic algorithms, melody, harmony, and counterpoint.
Website: hasslerthurston.com/projects/hacc; sample code at github.com/jthurst3/computermusic
- **Automata Game** – created unique turn-based board game using cellular automata; inspired by John Conway's "Game of Life", Stephen Wolfram's "A New Kind of Science", and Coursera's Model Thinking class.
Website: hasslerthurston.com/automata; code at github.com/jthurst3/automata_game

COMPETITIONS AND COMMUNITY INVOLVEMENT

- **Tutoring Chair and Tutor, Computer Science Undergraduate Council**, University of Rochester (Fall 2014-present)
- **Teaching Assistant**, Computer Models and Limitations (Spring 2015), Computation and Formal Systems (Fall 2014)
- **Workshop Leader**, Computer Models and Limitations (Spring 2015)
- **Peer Facilitator, One Community Program**, University of Rochester (Summer 2014)
- **2nd Place, Machine Learning, CS Games**, Sherbrooke, QC (with Jack Valinsky, Spring 2015)
- **3rd Place, Relay Programming, CS Games**, Montreal, QC (with Dan Hassin and Joe Brunner, Spring 2014)
- **Best Use of SendGrid API, RocHacks Spring 2014 Hackathon**, University of Rochester (Spring 2014)
- **Best Command-Line Interface, HackNY Spring 2014 Hackathon**, Columbia University (with Dan Scarafoni, Spring 2014)