AmyBea Walder

2221 NE 41st AVE, Portland, OR 97212

(c): 503-806-9399 (e): amybeawalder@gmail.com (w): https://atwalder.github.io/

EDUCATION

Portland State University – Portland, OR.   September 2018 – March 2019

- Post-baccalaureate program for additional coursework in computer science
- Overall GPA: 3.20
- **Related Coursework:** *Data Management in the Cloud and Cluster Computing, Full Stack Web Development, Cryptography*

Worcester Polytechnic Institute (WPI) – Worcester, MA.   August 2014 – May 2018

- B.S. Computer Science
- Overall GPA: 3.23
- Faculty adviser: George Heineman, heineman@cs.wpi.edu (can be contacted for reference)
- **Related Coursework:** *Software Engineering, Software Security Engineering, Intro to Artificial Intelligence, Machine Learning, Database Systems I & II, Human Computer Interaction, Operating Systems, Machine Organization and Assembly Language, System Programming Concepts, Algorithms, Foundations of Computer Science, Programming Languages, Linear Algebra, Probability, Statistics I & II, Discrete Mathematics*

EXPERIENCE

Higher Education Research Experiences (HERE), Research Participator – Oak Ridge National Lab May 2019 – July 2019

- Played a crucial role in design and development of real-time dashboards for data analytics purposes
    - Big data architectures and machine learning tools were integral parts of research and programming to build some software solutions.
    - Geospatial tools and server-side protocols and their deployment were further explored and implemented.

Major Qualifying Project (MQP), Student – WPI   September 2017 – April 2018

- Equivalent to a senior capstone project
- Created an Android application, along with an accompanying written project report, that will facilitate the collection of data for the experimental stage of the Music-induced Analgesia Genome Study (IMAGS)
- Application provides patients who suffer from chronic pain a tool to document their pain before and while listening to a selected song while simultaneously gathering referenceable data, which is needed by and accessible to the study researchers
    - Aided by the Spotify Android SDK and Spotify API via OkHttp
    - A local copy of data stored on mobile device via SQLite, for offline availability
    - Volley was used to send data through HTTP POST requests to PHP script accessing MySQL database on WPI server
- Project managed on GitHub, following the agile scrum methodology for the software development process, aided by other project management tools such as Trello
- Poster presentation to the CS department at WPI included a successful demonstration of the application
- The project report and poster presentation detailing our application and its development are available upon request
- Project adviser: Wilson Wong, wwong2@wpi.edu (can be contacted for reference)

Interactive Qualifying Project (IQP), Student – Worcester, England   March 2017 – May 2017

- The IQP is a requirement for all bachelors' degrees and is normally done during a term abroad
- WPI global project site sponsored by the University of Worcester (UW) working with the Worcester Arts Workshop

(WAW)
- Presented a guideline for improving the Workshop's operations to allow it to improve its sustainability (e.g. switched event and class bookings to an online system, Eventbrite) and accessibility, which involved the community identity and operations of the WAW
- My team conducted interviews and research to allow us to gather information on organizations similar to the Workshop as an operational comparison
- Further developed WAW's history by researching the buildings history in the local library archives
- Promoted more community engagement by setting up an event partnership with UW which hosts a city annual green week event
- Observed, analyzed, and reported employees' time usage to develop recommendations for using time more efficiently and delegating tasks
- Presented a PowerPoint presentation at UW and the Meliora International Symposium of Student Sustainability Research showing the true importance and potential of the WAW
- Project adviser: Ruth L. Smith, rsmith@wpi.edu (can be contacted for reference)

U.S. Geological Survey (USGS), Computer Scientist Intern – Vancouver, WA.   February 2016 – August 2016
- Done during leave of absence at WPI
- Used skills in microcontroller programming to write successful test software for a 'site power management board' utilized at many sites on Cascade volcanos (accomplished solutions solved in the C programming language)
- Spent time working with large data sets and applied Python programs to translate and transform the raw sample data into compelling and useful form that could be utilized by USGS scientists in their work
- Serviced field instruments that provide data for the USGS at Mount St. Helens
- Supervisor: Chris Lockett, clockett@usgs.gov (can be contacted for reference)

Oregon Health & Science University (OHSU), Student Researcher – Portland, OR.   June 2013 – August 2013
- Full-time assistant in a research lab, organizing and analyzing data from experiments looking into the ways that alcohol affects auditory learning in zebra finches
- Listened to collected zebra finch audio motifs and sorted them using Sound Analysis Pro
- Presented a poster detailing the results of the research and findings in the annual Howard Hughes Medical Institute Science Without Limits Symposium at Lewis & Clark College
- Supervisor: Dr. Christopher Olson, colson1@midwestern.edu (can be contacted for reference)

TECHNICAL SKILLS:

- **Programming Languages**: Python, Java, SQL, HiveQL, Mango, C, C++, Racket, HTML, CSS, Javascript, JQuery, Bootstrap, Node, Express, Mustache, Socket, MATLAB
- **Operating Systems**: Windows, Ubuntu (GNU/Linux)
- **Software**: Wireshark, Android Studio, Eclipse, JetBrains PyCharm and WebStorm, Git, GDB, Microsoft Office Suite, Google Drive and Analytics, Google Cloud Platform, CouchDB, Adobe Photoshop, Premier Pro CC, and Animate, Maya, Zbrush
- **Lab**: Aseptic Technique, Microscopy, Plasmid Purification and Cloning

ACTIVITIES / COMMUNITY SERVICE:

Alpha Gamma Delta Women's Fraternity, Interim Social Internal Chair – WPI   November 2014 – November 2017
- Held leadership interim position fall 2016
- Lead weekly planning committee, presented upcoming events to chapter, and organized successful on and off campus events

Women's Rugby Club Team, Equipment Manager – WPI   September 2015 – December 2016
- Maintained sporting equipment by bringing it to practice, later storing it, and washing it as needed

Rose City Rollers Junior Roller Derby Team, Skater and Volunteer – Portland, OR.   October 2012 – April 2014
- Volunteered at events working whatever position was needed (ushering, working merchandise, tracking capacity)

Grant High School Dragon Boat Team, Tiller, Paddler, and Caller – Portland, OR.   January 2012 – June 2014
- Placed 1st in Portland Rose Festival Dragon Boat Race 2012 High School Division