

Virginia Anne Differding

708-969-8931 • vadifferding@dons.usfca.edu • <https://github.com/vadifferding/>

EDUCATION

University of San Francisco (USF), San Francisco, CA
B.S. in Computer Science

August 2015 – December 2021

NOTABLE PROJECTS

Sound clip Manipulator (Java)

- Implemented a data structure that stored and manipulated sound clips using a linked-list structure where each sample was a linked list of the sampled values for each channel
- Allowed users to manipulate a sound clip with functions such as trim silence, clip, and add echo effect

Implementation of Boggle Game (Java)

- Found all possible words on any given Boggle board using implementation of Trie data structure
- Allowed for user vs. computer games where user went first and the computer found all remaining words
- Implementation of Dictionary class also functioned as document spell checker

Maze and Sliding Tile Game Solvers (Java)

- Used Dijkstra's algorithm on an implicit graph utilizing Manhattan Distance, A*, and Greedy search to calculate the most efficient way to solve a given puzzle or maze

Number Converter and "Bit Twiddling" (C)

- Implemented UNIX command line program in C that can convert values between different number systems and also perform "bit twiddling" by converting range of bits in a value
- Capable of supporting any 32-bit value in any representation (binary, hexadecimal, unsigned integer, signed integer)

CPU (Logisim)

- Designed and created a 16-bit CPU from logic gates capable of running basic assembly programs such as finding n-th Fibonacci number and largest element of an array

TECHNICAL SKILLS

- **Programming languages:** Java (Proficient), Python (Proficient), C (Proficient), C# (Intermediate)
- **Website design:** HTML, CSS, Flask, Bootstrap
- **Creative Software:** Adobe Photoshop, Adobe Animate, Ableton Live

WORK EXPERIENCE

Human Computer Interaction Lab Researcher

August 2017 – December 2017

University of San Francisco, San Francisco, CA

- Worked with Unity, Mixamo, and Fuse to create applications for Google Daydream

Teaching Assistant for Applied Business Technology

January 2017 – December 2017

University of San Francisco, San Francisco, CA

- Supported business students as they developed basic proficiency in programming
- Provided in-class and out-of-class guidance for labs, homework, and projects

Information Technology Intern

May 2017 – August 2017

Applied Systems, University Park, IL

- Provided expertise to resolve technical problems for internal clients, with a focus on customer service
- Provided hardware and software desktop support to 800 user environment including workstation rollout
- Mentored in application support, technical service, and imaging computers

EXTRACURRICULAR ACTIVITIES & INTERESTS

- Member, **Women in Computer Science** Spring 2016 – Present
- Officer, **Association for Computing Machinery** Fall 2018 – Present
- Member, **Delta Delta Delta Sorority** Fall 2017 – Present
- Member, **Alpha Sigma Nu Honor Society** Spring 2018 - Present
- Improv Alum, **The Second City**
- Two-time Scholarship recipient, **University of San Francisco Grace Hopper Scholarship**