Arianne Butler

arianne.leah@usask.ca | linkedin.com/ariannebutler | ariannebutler.com

Education

Bachelor of Science Honours, Computer Science Software Engineering [Expected April 2019]
- Minor in Studio Art
- University of Saskatchewan, Saskatoon, SK, Canada

Relevant experience

Engineering
- Experience with designing medium scale software systems, including requirements, architecture design, change management, testing, implementation, and user/programmer documentation
- Practice with software engineering tools and methods, including teamwork, Git version control, code review, pair programming, and SCRUM
- Familiar with various incremental and iterative software development processes, as well as commonly used software architectures and their properties

Developer Tools
- Unity, Visual Studio, Android Studio, Eclipse, IntelliJ, Netbeans, QTspim
- Development using the UNIX terminal

Implementation
- C#, C++, Java, HTML, CSS, SQL, JavaScript, Obj-C, MIPS assembly

UI development
- UI development and design of Android application, digital board-game for PC, and personal website

Systems software
- Implemented a kernel level thread scheduler and user/kernel level system calls using priority queues
- Translated binary into machine instructions and floating point numbers for execution by a CPU
- Implemented a file system simulation using monitors for threading concurrency issues

Data Structures and Algorithms
- Implemented tree based data structures (binary, AVL, red-black, 2-3, KD, heaps)
- Implemented graph algorithms, including Dijkstra's, Kruskal's, and greedy solutions to the Knapsack problem
- Employed sorting algorithms, including Radix Sort, Merge Sort, Heap Sort, and Quick Sort
- Familiar with divide and conquer and dynamic programming algorithms

Knowledge of Unix/Linux, Windows environment, and APIs
- Extensive experience building for Linux, including use of the UNIX terminal for debugging, compiling, and testing
- Experienced with makefiles, gdb, and regex
- Proficient in string manipulation and parsing
- Familiar with Windows and Windows command line

Personal and professional development
- Fluent in English and German
- Technical writing – skilled at writing comprehensive reports and design docs
- Interpersonal skills – communication, team player, open to criticism
- Aptitude for learning new concepts and troubleshooting (both independently and on a team)

Work

Teachers Assistant for Intermediate Data Structures and Algorithms Course (CMPT280)
University of Saskatchewan, Jan 2016 – present
- Running lab tutorials which assist in teaching second year students the foundational concepts of data structures and commonly used algorithms
- Providing help-desk hours to students who require one-on-one support in the understanding and implementation of homework assignments, including assistance in debugging and the conceptualization of course material

Instagram Manager
Louis' Loft (@louisloft), Jan 2015 to June 2016
- Launched and managed official Instagram and assisted in branding a young business via social media
- Visual designer and photographer
- Gained over 600 followers in the first year

Science Instructor
Kamskenow Science Outreach Program, Sep 2015 to April 2016
- Brought hands-on science experiments to inner city classrooms
- Taught and demonstrated scientific concepts
- Aided and encouraged children in developing a lasting interest in science

Disablity Student Services (DSS) Volunteer
University of Saskatchewan, Oct 2016 – present
- Transcribe and organize detailed and descriptive technical lecture notes for students with learning disabilities

References
- Mark Eramian, Computer Science Professor at the University of Saskatchewan, eramian@cs.usask.ca
- Bradley Weiers, Senior Software Engineer at Unity Technologies, bradley@unity3d.com