

Tylan Bayley-McPherson

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EDUCATION

University of Victoria

Bachelor of Science - Computer Science (GPA: 3.69/4.00)

Minor: Business

Sep 2017 – May 2021

Victoria, British Columbia

TECHNOLOGIES AND LANGUAGES

- Languages: Javascript, HTML, CSS, Java, Python, C#, C
- Technologies: React, Unity, PostgreSQL, Numpy, Git
- Other: Data structures and algorithms, object oriented principles

PROJECTS

Sketchpad

[\[Demo\]](#) [\[Github\]](#)

- Utilized JavaScript, CSS and HTML to enable users to create custom drawings
- Wrote function to create pixel-like divs in the DOM, allowing users to resize their drawable canvas anywhere from a 2x2 to 64x64 grid
- Developed tools that empower users to change the color of their pencil, erase mistakes, and leverage a randomized rainbow tip for added spontaneity within drawings

Raytracer

[\[Github\]](#)

- Used Python to generate a ppm image by calculation of intersection between rays fired through each pixel and ellipsoids in object space
- Implemented parsing of .txt file to initialize object and material properties necessary to draw objects using phong illumination model
- Leveraged numpy framework to vectorize data for increased performance of calculations

DevOps Research Simulation Project - Banking

[\[Github\]](#)

- Simulated theoretical bank operation scenarios in JMT by applying queueing theory concepts of M/M/c/N and M/G/1 queueing models
- Wrote VBA macros to save time by 90% and viewing space by 30% via automating the formation of 20 pages of Excel tables for final report documentation
- Wrote java programs for automated testing of chi-squared and kolmogorov-smirnov as well as programs to generate and process data of csv files

WORK EXPERIENCE

Painting Team Lead

May 2019 – Sep 2019

Scholars Edge Painting

Comox, British Columbia

- Collaborated with a team of 4 to complete house painting contracts and designs of over 40 clients during a 4-month time period
- Delegated tasks daily to team members, ensuring members worked on tasks utilising their strengths resulting in the increased quality and more efficient completion of tasks
- Reported to both clients and segment manager of progress at the end of each day keep involved stakeholders informed and involved in the design process