Milpitas, CA
1-(555)-555-5555

Michael Kelly

m.kelly.devv@gmail.com
mkellydevv.github.io

Employment

Full-Stack Developer **Contract** **Oct 2018 - Present**

JavaScript, MongoDB, Express, React, Redux, Node, jsPsych, Bootstrap

- Developed a full-stack web application for a doctoral student's dissertation study on the prediction of suicide.
- Used Mongoose and MongoDB to store participant data for the 8 week duration of the study.

Education

Fairfax, VA **George Mason University** **Aug 2008 – May 2015**

- *Completed 106 credits towards a* BS in Computer Science
- Coursework Highlights: Data Structures, Analysis of Algorithms, Database Concepts, Visual Computing, Data Mining, Formal Methods & Models, Numerical Methods in Engineering, Software Reqs. & Design Modeling

Software Projects

Online Platform Game **Jan 2019 - Present**

JavaScript, Node JS, Pixi JS, Express, Heroku, Git

- Developed a 2D platform game and engine using object composition techniques playable via a web browser.
- Implemented engine features such as: Trigger/Condition/Action System, Finite State Machine AI, and various Broad/Narrow phase collision culling and detection techniques.
- Incorporated the Pixi JS rendering library to create a camera capable object tracking and parallax layers and an asset loader to load level data from JSONs.

Online Tile Map Editor **May 2018 - Aug 2018**

JavaScript, Node JS, Pixi JS, Express, Bootstrap, jQuery, Heroku

- Designed a tile map editor that game developers can use to create 2D tile based levels accessible via browser.
- Utilized an auto-tile algorithm that determines the shape of fill tiles and the border masks/overlays required.
- Implemented layer scaling, offsetting, and parallax directly into the editor to decrease level development time.

Vector Graphics Animator **June 2016 - July 2016**

C++, FLTK, OpenGL Visual Studio, Git

- Created a program where users can create animations using vector graphics and frame tweening.
- Implemented a scene graph data structure which is a node tree where each node holds a vector polygon and pointers to its sub-nodes; transformations are applied to a node and all its sub-nodes.
- Designed so that any frame where a transformation occurs becomes a key frame and intermediate frames are linearly interpolated during playback.

Subdivision Surface Modeler **June 2016 - July 2016**

C++, FLTK, OpenGL, VIsual Studio, Git

- Built a program that refines polygonal meshes using a derivation of the Catmull-Clark subdivision technique as it applies to quadrilateral faces.
- Implemented a random height field generator and prefabricated polyhedral objects to test the algorithm.

Languages And Technologies

- Languages: *(Proficient)* JavaScript, C++, HTML/CSS; *(Familiar)* C#, Python, Java
- Technologies: *(Proficient)* Visual Studio, Git; *(Familiar)* Unity, OpenGL, SSH, UML, Matlab, WEKA
- Web Technologies: *(Proficient)* jQuery, Bootstrap, MongoDB, Express, Node JS, Socket.io, Pixi JS; *(Familiar)* React, Redux, MySQL