Sadman Kazi

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Skills

Languages C/C++, Python, Lua, Java, C#, Javascript, GLSL
Frameworks OpenGL, Android, SDL, Qt, gtk+, Scaleform
Tools Visual Studio, vim, git, bash, Stingray, Unity3d, Unreal, CryEngine

Experience

Autodesk Inc.
Montreal, Quebec

Software Developer Intern
January 2016 - April 2016

Worked on Project Expo, a cross-platform architecture visualization application built on top of the Stingray game engine
- Reworked unzip plugin for partial project extraction for cross-pipeline support in Stingray using C++
- Implemented product licensing using C# and about-dialog in Scaleform using Lua
- Extended various behaviours and interactions to mobile with Stingray
- Reworked cursor behaviour between the editor and the engine using the Chromium Embedded Framework
- Implemented additional debugging modes to speed up developer workflow in Lua

Deloitte Canada
Kitchener, Ontario

Software Engineer, d{} Lab
May 2015 - August 2015

Developed a real-time communication architecture for large-scale sensor networks for miners
- Worked in a team of two to deploy a mesh network communication system in Python
- Designed and implemented the off-the-cloud software architecture in Python and C++
- Optimized the platform to ensure that data is pushed to the cloud in real time
- Developed an interface for an OLED screen and input registry in C++
- Created a library that processes regular images and displays them on an OLED in C

University of Waterloo Nano-Robotics Group
Waterloo, Ontario

Technical Lead, Controls Team
September 2014 - Present

In charge of controls software implementations for micro-robot pathing using actuator and solenoid magnetic fields
- Currently leading the rewrite of the entire program in C++
- Led the design and implementation of pathing specifications for ICRA 2016 in python
- Implemented actuator controls and Qt GUI in C++
- Implemented cross-platform build system with qmake and Travis CI
- Competed at ICRA 2015 in Seattle as a member of the debugging team

Personal Projects

3d Game Engine C++ • GLSL • OpenGL • SDL

An open source 3d game engine under development
- Implemented shader compilation and mesh rendering classes
- Implemented game loop, keyboard and mouse input handling
- Developed keyboard/mouse-controlled viewport camera
- Integrated an importer to load 3d models to the scene viewport

Myo Pad C++ • OpenGL • Myo SDK

A program using the Myo armband that exports drawings/writing on a surface to a computer's graphical interface
- Created the module that received data from the armband using the Myo SDK
- Developed the main interface that takes data to draw, erase and move the cursor

Eclipse Unity3d • C#

An open source 3d game for Android made using the Unity3d engine
- Developed everything independently, including scripting, modelling, lighting, and texturing

Education

University of Waterloo
Waterloo, Ontario

Candidate for Bachelor of Software Engineering
2014 - 2019 (Expected)