Mohamed Kazma

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https://moekaz.gihub.io/

LINKS

Github: @moekaz
LinkedIn: Mohamed Kazma

EDUCATION

CARLETON UNIVERSITY
BS in Computer Science
Ottawa, ON
Cum. GPA: 3.5 / 4.0
Major GPA: 3.55 / 4.0

SKILLS

LANGUAGES:
C++ • C • C# • Java •
JavaScript • CSS • HTML •
Python

FRAMEWORKS:
Node.js • Pug(Jade) • Express.js •
JUnit

TECHNOLOGIES:
Unreal Engine • Unity • MongoDB •
Git • SVN • SQL

LIBRARIES:
OpenGL • GLSL • SFML • JQuery •
Socket.io • Swing

EXPERIENCE

ROCKSTAR GAMES | Associate Animation Programmer
March 2020 - Present | GTA, ON
- Worked on Procedural Motion Reaction systems with physics-based animation driven ragdolling
- Worked on animation system state machines for managing AI states with procedural reactions
- Wrote state and animation networks with Blend Trees and Nodes for blending between animations

ROSS VIDEO | Software Developer
Sept 2018 - Dec 2018 | May 2019 - Sept 2019 | Ottawa, ON
- Worked on DashBoard, a program that simplifies connecting and configuring broadcasting devices with scriptable logic and API calls
- Developed a scheduler product that creates a manager for broadcasting devices and send certain API calls either on a scheduled time or instantaneously
- Worked on build pipeline with Maven/Tycho to generate a build script that is used to create an executable build of the product

CANADA REVENUE AGENCY | Automation Tester
Sept 2019 - Dec 2019 | Ottawa, ON
- Wrote Unit tests for user stories in Java using the JUnit framework
- Worked on library that is used by the team to write tests that allow us to navigate through the application using RMI for remote function invocation
- Developed an agile git workflow with a branching strategy and a code review system using merge requests

CARLETON UNIVERSITY | Teaching Assitant
Sept 2017 - May 2018 | Jan 2019 - April 2019 | Ottawa, ON
- Assisted with second-year data structures, web development, and discrete Mathematics courses
- Held office hours to help students understand course material as well as approach problems they are facing

PROJECTS

MTRX ENGINE | August 2018
- Physics Engine based in C++ using GLM, GLAD, GLFW, and Spdlog
- Implemented Rigidbody dynamics with Newtonian Physics with application and integration of said forces and generating torques to create rotation when necessary as well as basic inertia tensors used for simulating said rotational forces
- Added basic bounding collider volumes(Sphere, Capsule, Box, Convex Shape colliders) that used in basic collision detection algorithms and are also helpful for raycasting query algorithms
- Implemented GJK, an algorithm used for collision detection of any convex shape, for more complex and finer collision detection
- Implemented a BVH(Bounding Volume Hierarchy) which creates hierarchies of bounding volumes(colliders) which optimizes collision detection calculations
- Added force generators that are used to easily add a certain force to a Rigidbody(Gravity, Drag, Buoyancy, Spring Forces, etc...)