Mike Burns

Simulation Team Lead & Senior Developer
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TECHNICAL PROFICIENCY

Python, C#, JS, C++, SQL, Haxe, GLSL, Groovy, AS3, HTML5, CSS3, XML
Unity, AWS, Selenium, TensorFlow/Keras, Pandas/Numpy, Git/SVN/P4/Plastic, Jenkins/Teamcity, JIRA, Agile

WORK EXPERIENCE

Shadow Health, Gainesville, FL
Simulation Team Lead & Senior Developer   Nov 2016 – Present

- Advanced over 1,800 nursing programs globally after leading a team of 13 software engineers and technical designers in utilizing the Unity engine to develop high-fidelity 3D simulations for nursing colleges.
- Drove medically accurate virtual interactions by programming systems and tools using C# and JavaScript.
- Supported the deployment and releases on AWS S3 for 11 products (78 unique assignments) for over 460K users after testing the products.
- Successfully increased testing velocity and release stability, leveraging Python, Selenium, Jenkins, and shell scripts to program suite of automated tests.
- Cut manual audio processing by 50% by engineering machine learning tool using Watson in Python.

Workinman Interactive, Rochester, NY
Game Developer   Jan 2014 – Oct 2016

- Employed C# in Unity and Haxe in developing 14 mobile and web games for Disney, Nickelodeon, and BGCA.
- Programmed and delivered a 3D game with event-driven artificial intelligence using A* pathfinding and online networked gameplay in two months, which was on time for the Nick Kids Choice Awards event.
- Increased steam ratings after programming fractal GLSL shader and C# enemy AI for the game "Deathstate."
- Innovatively designed a financial education game, engineering the pipeline to enable teams to modify and deploy new game content using Haxe.
- Improved framerates on low-end mobile devices by analyzing and elevating code performance.

Philips Respironics, Pittsburgh, PA
Software Engineering Intern   May 2011 – Aug 2011
- Used Grails/Groovy to program web-app and introduced RESTful CRUD operations for server and database.
- Redesigned front end website using Photoshop and wrote scripts to import files from previous architecture.

EDUCATION

Georgia Institute of Technology (Georgia Tech), Atlanta, GA
Masters of Science in Computer Science, Machine Learning Specialization   2019 - Present
Coursework: Artificial Intelligence for Robotics (Kalman filters, SLAM, planning), Reinforcement Learning

Rochester Institute of Technology (RIT), Rochester, NY
Bachelor of Science in Game Design and Development - 3.4/4.0 GPA (Honors), Dean's List 7 times   2014

PROJECTS:
- Created robotic water turret using Tensorflow, Caffe, Raspberry Pi, 3D printed body, servos.
- Programmed in OpenGL: A* pathfinding, bezier plane, GJK collision with broad phase OctTree optimization.
- Programmed and applied reinforcement learning algorithms PPO, TD(λ), multi-agent Q, KWIK, value iteration.
- Developed visual behavior tree AI solution for Unity. Graph editor and runtime components with optimizations.
- Programmed stock market trading agent using random forest with bagging and boosting.
- Programmed common data structures in Python for increased understanding (HashTable, BST, Heap, etc.).