

John Joseph

mynameisjohnj@gmail.com
github.com/mynameisjohn
thecoloraddiction.com

Skills

- Programming
 - C, C++, C#, Python, Fortran
 - CUDA, OpenCL, MPI, OpenMP, OpenCV
 - OpenGL, GLSL, mentalray API, MEL
 - Android (NDK and ARM NEON), OpenGL ES
 - VST3 / AU / AAX audio plug-in SDKs
 - Unity C++ plug-in development / C# interop
 - Computational Physics/Simulation
- Mathematics
 - Numerical Methods
 - Statistical Analysis
 - Physics/Applied Math
 - Signal Processing
 - Advanced Calculus
- Computer Graphics Software
 - Unity / Unity plug-in development
 - Oculus VR and Google Daydream SDKs
 - Modern OpenGL / GLSL shaders
 - Blender, Gimp, Autodesk Maya
- Audio Software
 - Audio plug-ins / plug-in host development for Mac, Windows and ARM (using C and C++)
 - Debugging experience in every major DAW
 - Software and API development work involving ARA

Experience

- Creating unique musical VR spaces in Unity with a custom audio plug-in for mobile and PC
github.com/mynameisjohn/UniSampler
- Writing a cross platform Unity VR SDK (my answer to VRTK and used in my VR work)
github.com/mynameisjohn/wrapVR
- Developing high performance audio programs and plug-ins with C++/JUICE for Mac, PC, and ARM at Cakewalk and Celemony (and for personal use)
- Composing non-linear songs and arrangements that can be played by my plug-in in Unity
- Worked with iKinema Ltd. to perform statistical analysis of mocap data using Python and MEL
- Studied non-photorealistic rendering techniques, replicating work by Gooch & Gooch in GLSL
- Created a realistic animated model of the *tadarida Brasiliensis* bat to generate flight pattern datasets used by machine learning algorithms to study how bats fly in large groups
- Used OpenCV and OpenCL to optimize computational models of vision as part of a study on computational neuroscience and high performance computing
- Tutored at the Boys and Girls club of South Boston, helping with homework and trying to be a pal

Education

- Boston University, class of 2014
 - B.A in Physics, minor in Computer Science
- Medfield High School, class of 2010

About Me

I enjoy applying math and physics where most wouldn't expect it and tend toward interdisciplinary fields requiring quick thinking and innovation. In my free time I like to read and would one day like to write.

My areas of expertise are Physics, Computer Graphics, and Audio. The broad nature of these subjects has made my talents diverse.

I'm a fast learner and actively seek out challenging experiences. The times in which I struggle are those in which I thrive.