

Michael Donovan

CAMPUS:

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EDUCATION

Candidate for Master of Science in Engineering: Computer Graphics and Game Technology, August 2009

University of Pennsylvania, School of Engineering and Applied Science, Philadelphia, PA
Cumulative GPA: 3.49

Bachelor of Science in Computer Science, June 2008

Union College, Schenectady, NY

Cumulative GPA: 3.41, Major: Computer Science, Minor: Mathematics, Combined GPA: 3.48

Honors: George H. Williams Prize (Excellence in Computer Science), Computer Science Departmental Honors, Academic All-American Nominee (Baseball)

TECHNICAL SKILLS

- C/C++, Java, Python, ML, SQL
- OpenGL, DirectX, MEL/MayaAPI, Cg, CUDA, Java Swing, MPI
- Gamebryo, Maya, Flash
- Access, Linux/Unix

PROJECTS

- “*Non-Photorealistic Fire*”, Senior Capstone Project implementing a low cost online non-photorealistic fire for use in real time applications such as video games
- Implemented a laser tag game using a fragment shader for per-pixel lighting of the world.
- Built an OpenGL-like renderer from the ground up to better understand the fundamentals of graphics
- Built a scene graph that renders in real time via OpenGL or can be ray-casted offline
- Built a volume renderer
 - Built 3D Space Invaders using Gamebryo
- Built a smoke simulation
 - Built an interactive rigid body simulation
- Built a Maya plugin for controlling smoke

RELEVANT COURSEWORK

University of Pennsylvania: Computer Graphics, Computer Animation, Visual Communication, 3D Modeling, Advanced Graphics, Physically Based Animation, GPU Programming, Game Design & Development

Union College: Computer Graphics, Graphics Independent Study, Computer Science of Video Games, Artificial Intelligence, Parallel Programming, Large Scale Software Design

WORK EXPERIENCE

IT Intern - Watson Foods Inc.

June 2006 – June 2007

Worked in the Information Technology department of this private company where my responsibilities included resolving network issues, user system problems and the deployment of a handheld barcode reading system.

Computer Science Help Desk Tutor – Union College

September 2005 – June 2006

Held tutoring sessions weekly for underclassmen enrolled in introductory level Computer Science classes

Computer Science Help Desk Coordinator – Union College

September 2006 – June 2008

Held the same responsibility above but also was appointed by the faculty to coordinate the schedule for other tutors and acted as a liaison between the student tutors and the faculty.

AOP/HEOP Tutor – Union College

September 2007 – June 2008

Tutored students in the Academic Opportunity Program/Higher Education Opportunity Program who were enrolled in Computer Science classes.

Undergraduate Teaching Assistant – Union College

Spring Term 2006

Teaching Assistant for Introduction to Computer Science

AFFILIATIONS AND ORGANIZATIONS

International Game Developers Association – Student Member, Philadelphia Chapter

ACM SIGGRAPH – Student Member

Sigma Chi – Member since October 2005, Treasurer 2007