

John Mooney

<http://mason.gmu.edu/~jmooney3/>
jmooney3@gmu.edu



Education

George Mason University (GMU) - May 2013

Bachelors of Science, Computer Science
GPA: 3.94; In Major GPA: 4.0

Selected Coursework

- › CS325 - Introduction to Game Design
- › CS425 - Game Programming I
- › CS483 - Analysis of Algorithms
- › CS475 - Concurrent and Distributed Systems
- › SWE437 - Software Testing and Maintenance

Research

- Mooney, J., Gandhi, R., and Allbeck, J.M. Modeling Agent Determination of Spatial Relationships. Symposium on Interactive 3D Graphics and Games, March 2013.

Technical Skills

Programming Languages

Proficient in: C++, C, Python, Java, MEL, BASIC, HTML5, CSS
Working Knowledge of: Javascript, PHP

Language APIs

Proficient in: OpenGL, Ogre3D, Autodesk Maya, Pyglet, Pygame, Windows
Working Knowledge of: Junit, OpenAL

Development Tools

Proficient in: MS VisualStudio, MySQL, Autodesk Maya, Linux/UNIX, Eclipse, SVN, Git
Working Knowledge of: Adobe Photoshop, Adobe Dreamweaver

Experience

Undergraduate Research Assistant - *Games and Intelligent Animation* *May 2012 - Present*

- Researched and developed solutions for modeling virtual human understanding of spatial relationships
- Assisted graduate students in modeling Parametrized Action Representations and Memory Models for virtual humans

Computer Consultant *June 2011 - Present*

- Developed a custom scheduling program for the Volgenau School of Engineering Office of Undergraduate Student Services
- Automated data searching, sorting, and conversion in a Microsoft Excel database for the Office of Orientation and Family Programs and Services

Peer Adviser - *GMU Volgenau School of Engineering (VSE)* *Aug 2011 - Present*

- Mentored and tutored students in technical courses including Computer Science and Mathematics courses
- Represented the Volgenau School of Engineering: Spoke on behalf of VSE at university functions

Peer Mentor - *GMU Honors College* *Aug 2012 - Present*

- Assisted academic and social development for dormitory residents as a peer counselor and mentor
- Planned educational, social, and cultural programs for residents

Patriot Leader - GMU Office of Orientation and Family Programs and Services (OFPS)

Feb 2011 - Oct 2011

- Acted within a team of 31 to set up programs for, inform, and welcome incoming students to the University
- Facilitated and led student to student interaction in groups of 16
- Furthered leadership, presentation, and teamwork skills

Technology Coordinator Hiring Committee - GMU OFPS

Sept 2011

- Reviewed resumes and interviewed potential applicants for Technology Coordinator

Teaching Assistant - Virginia Western Community College (VWCC)

Spring 2010

- Assisted professor in teaching an undergraduate course, Computer Programming for Engineers, while enrolled in the course
- Designed and developed the comprehensive final exam and Presented lectures on C++ Programming

Projects

CS-100 Engine (Python)

Fall 2012 - Present

A game engine written in python designed for easy and extensible game creation. Underlying components include Scene Graph, Quadtree, Rigid Body Physics, and more to come.

Spatial Relationships with Virtual Humans (C++)

Fall 2012 - Present

A model of spatial relationship determination of virtual humans. Commands are issued in English imperative format, ambiguities are resolved, and the action is performed.

Sketch (Python)

Spring 2012

A 2D platformer set in an artist's sketchbook. The player controls a sword wielding stick figure. With the power to draw into the world, the player must fight his way through the forgotten drawings.

Bezier Curve Terrain Generator (C++)

Fall 2012

A 3D terrain generator created using C++ and OpenGL. The terrain is created by applying a peak generation technique at various points specified by a bezier curve.

Spatial Data Plugin in Autodesk Maya (Python)

Summer 2012

An automated tool for tagging 3D models with spatial and site data. The data is transferred to a database which is then used for animation and relationship determination.

Achievements

Selected student representative for VSE at Best and Brightest Dinner
NVTC Daniel R. Bannister Endowed Scholarship
Rockwell Foundational Scholarship
GMU Honors College Merit Scholarship
VSE Dean's List
Admittance to GMU Honors College
High School Valedictorian
AP Scholar with Honors Award
Quincy Jones Developmental Scholarship
VWCC Regional Academy for Advanced Technology Graduate
VHSL All-State Track Athlete

Fall 2012
Fall 2012, Spring 2012
Fall 2011, Spring 2011
Fall 2010 - Present
Fall 2010 - Present
August 2010
June 2010
June 2010
June 2010
May 2010
2009, 2010