ARASH GHODSI

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OBJECTIVE

A challenging, exciting, dynamic position as a software engineer, where I can utilize my engineering and programming talents. To work amongst other driven, intelligent people to learn from and engage.

ACADEMIC EXPERIENCE

EDUCATION

Computer Science BA from the University of California, Santa Cruz   June 2011

SOFTWARE DEVELOPMENT

3D First Person Shooter — Coauthored an OpenGL based 3D FPS. Developed the player model, animations, camera system, UI, physics and collision detection. Worked on modeling and texturing the environment and developed its atmospheric and lighting-related effects. (Class project which placed top among peer projects)

Cloth Physics — Physically-based animation of a swinging hula skirt. The motion is simulated using spring forces at each edge connecting the vertices of the skirt's triangular mesh. The external forces are a time varying oscillatory motion and gravity. (Class project which placed top among peer projects)

Ragdoll Physics — Implemented a hierarchical ragdoll physics system for a humanoid with 13 joints. The physics were simulated using angular springs and forces.

Line Integral Convolution (LIC) Imaging — Wrote an image processing application which displays a source image upon which the user draws vectors which are used to generate an interpolated flow field using Shepard's interpolation; the vector field is then imaged using LIC in real time.

Theory — algorithms, complexity theory, programming languages, object-oriented programming, data structures

Applications — graphics, game programming, game engines, animation, data visualization

Mathematics — linear algebra, discrete math, differential equations, computational models, set theory, probability, 2D/3D geometry, 4D homogeneous coordinates, quaternions

Programming Languages — C/C++, C#, Java, Perl, Assembly, MATLAB, UnrealScript

ART AND DESIGN

Web Design — HTML, CSS, JavaScript, Flash (see http://evofusion.starlightservers.com/flash)

Game Design — OpenGL, XNA, Unreal Engine. Experienced in game engine design, high level game conceptualization, physics, modeling, animation, environment and atmosphere implementation, UI, enemy AI

Visual Design — Drawing and photography as a hobby (see http://evofusion.deviantart.com/gallery/)

AWARDS

Campus Merit Sage Scholarship 2009
Scholarship acknowledging academic excellence. Must maintain a 3.0 GPA

National SMART Grant 2008
Third and fourth year undergraduate in science or engineering discipline with 3.0 GPA

Dean's Honor Student (community college) 2004-2006
Honor given to those you maintain a 3.5 GPA or higher

Alpha Gamma Sigma Member (community college)
AGS is a California community college Honor Society. Membership requires maintaining a 3.0 GPA

Gene S. Miller Scholarship (community college)

References and portfolio work available upon request