(626) 475-6283 **Nathanial Hapeman** Glendora, CA 91740
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Objective

Seeking a Full-Time Software Development Position or Internship

Experience

Web Development (JavaScript, CSS, HTML) November 2013- Present
- Currently working on website for Research Company
- Built personal portfolio from scratch with custom JavaScript games

Super Mario Brothers clone (c/c++) May 2013-January 2014
- Capable of loading, saving, adjusting options and soon level designing
- Uses OO programming, containers, memory management, and Threading

MyTunes: A Media Player similar to iTunes (Java) September 2013- January 2014
- Designed like iTunes but optimized for playlist management
- Uses multithread synchronization, object serialization, regex filters

Phong Illumination Model with Smooth Shading (c/c++ and openGL)
- Takes 3D triangular mesh then applies loop subdivision to create finer mesh
- Can manipulate mesh by translating, rotating, adding smooth Phong shading and shadows

Letter Recognition Software (Matlab)
- Self-guided project not influenced by any other algorithm
- Capable of identifying the letters written in a picture regardless of the font size

Pacman and Minesweeper Clones (JavaScript)
- Both games use fast algorithms and appropriate data structures for constant lookup time
- Pacman runs 30 FPS smoothly and only renders changes while playing
- Ghost in Pacman use Dijkstra's algorithm to find shortest path to Pacman

3D models and simulations (Matlab)
- Awarded top in class for creating a racecar simulation in Matlab
- Developed other models to simulate wind, gravity, jet propulsion, N-body experiments

Creating a Shell Clone
- Able to run commands, perform piping and io redirection, and signal handlers
- Implemented using POSIX C functions such as execv, dup2, and sigaction

Sound Programming and Composing
- Composing music using FL Studio for games and for personal pleasure
- Experience with JLayer, Java audio, SDL audio, Matlab audio, JavaScript audio

Undergraduate Research on Geothermal Reservoir Modeling
- Wrote a 36 page paper discussing geothermal energy as a viable energy source

Education

University of California, Riverside
Bachelor of Science, Mechanical Engineering GPA 3.14
Minor, Computer Science GPA 3.63

Skills

Languages
c++/c, Java, Python, Matlab, Lua, Bash Scripting, HTML, JavaScript , CSS

Programs
SolidWorks, Photoshop, Gimp, FL Studio, Eclipse, Unity and Blender (Beginner)

Sciences
Computer Vision, Machine Learning, Graphics, Mechatronics, Finite Element Methods, Statics, Dynamics, Thermodynamics, Fluid Mechanics, Mass and Heat Transfer