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KEVIN D. O'MARA

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EMPLOYMENT

Instructional Student Assistant	San Diego State University	Fall 2017

3D Game Programming Course
- Help students understand concepts of 3D game programming and the Unity game engine.
- Teach students how and why to use a version control system such as Git.

Software Engineer, Intern	Amazon	Summer 2017

Supply Chain Optimization Technology
- Implemented support ticket categorizer using unsupervised machine learning.
- Integrated categorizer into an existing bot for automation.
- Refactored legacy module to support region-based operations and maintain backwards compatibility.

Research Assistant	San Diego State University	Summer 2015 – Spring 2016

Computational Quantum Mechanics
- Replaced bottlenecking three-dimensional integral with system of linear equations to achieve 3x speedup.
- Validated new algorithm through time profiling and verifying the numerical accuracy and precision.
- Taught scripting and automation to two new research assistants.

EDUCATION

M.S. Computer Science	San Diego State University	Fall 2012 – Fall 2017

- M.S. in Computer Science, December 2017. GPA: 3.6
- B.S. in Physics, May 2016. GPA: 3.6
- Graduate Coursework: Combinatoric Algorithms; Intelligent Systems & Control; Software Engineering; Spatial Databases; Data Mining; Big Data; Advanced 3D Game Programming
- Undergraduate Coursework: Data Structures; Calculus III; Methods of Applied Mathematics II; Classical Mechanics; Modern Optics and Lasers (& Lab)

TECHNICAL EXPERIENCE

Projects
- **Unity Networking Library**. Enables client-side control for Unity multiplayer. C#, Unity
- **Procedural Cave Generator**. Tree-based 2d procedural cave generator. C#, Unity
- **Car Racing Game**. Simple 3d car racing game. Lead programmer of four-person team. C#, Unity
- **Pong/Breakout Hybrid**. Customizable combination of Pong and Breakout plus powerups. C#, Unity
- **Line-of-Sight Calculator**. Calculator for precise line-of-sight on a 2d grid. Lua
- **Command Line Shooter**. Command line bullet-hell shooter inspired by Space Invaders. Fortran
- **Board Game Expansion**. Most popular fan-made hero. Collaborated with international peers. Photoshop
- **Board Game Re-Theme**. High fidelity artwork for re-theming my favorite board game. Photoshop

ADDITIONAL EXPERIENCE AND AWARDS

- Honorable Mention in Northrop Grumman Code-A-Thon
- Outstanding Physics Graduate
- Physics Tutor (2015-2016)
- Vice President, Society of Physics Students (2015-2016)

LANGUAGES AND TECHNOLOGIES

Proficient
- C#; Visual Studio; Unity; Git

Familiar
- Java; C; SQL; Python; Lua; Bash; JSON; XML
- IntelliJ; Eclipse; Scala; Spark; Matlab; Fortran;