

Philip Clay Evans

Marina, California

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I am a dedicated full-stack software developer accomplished at efficiently implementing complex algorithms. I am a supportive team player with a propensity for organizational leadership. I am looking to work on a meaningful project that challenges my skills and keeps me fully engaged.



SKILLS

Software Development

- Web app development, Android development, software design, algorithm design and analysis, design patterns, TCP and UDP networking, operating systems

Programming/Scripting Languages

- C#, C++, C, Python, Java, HLSL, bash, SQL, Javascript, JSX, HTML, XML, CSS, MIPS, IA-32 Assembly

Frameworks/Tools

- React, Visual Studio, Eclipse, Android Studio, Cloud9, git, DirectX 11, Unity

Mathematics

- Differential Calculus, Discrete Mathematics, Linear Algebra

Other

- Gameplay programming, shader programming, game engine scripting, game design, hardware interfacing, hardware prototyping

EDUCATION

California State University, Monterey Bay (CSUMB), Seaside, CA

Bachelor of Science, Computer Science (with distinction), December 2017

EXPERIENCE

Researcher, Real-Time Dynamic Global Illumination Systems

CSUMB, Seaside, CA — DirectX, C++ — June 2016 - August 2017

- Developed a partially dynamic global illumination system in DirectX 11 that resulted in a 30% decreased rendering time over existing methods.
- Designed and implemented (under faculty consultation):
 - compute shaders to calculate lighting data and store it in a spatial partitioning data structure (octree)
 - tessellation and geometry shaders to decrease the volume of lighting information
 - partial scene updates to decrease frame processing time
 - voxel count prediction and bit packing to decrease memory usage

Teaching Assistant, Graphics Programming

CSUMB, Seaside, CA — DirectX, C++ — June-August 2017

- Co-developed course materials and student assignments covering the DirectX 11 framework, billboarding, mesh creation, vector and matrix math, shaders, lighting algorithms, and procedural generation.

Teaching Assistant, VR Game Jam

CSUMB, Seaside, CA — Unity, C# — June 2017

- Co-developed a Unity framework to allow non-programmers to easily prototype FPS games in VR. Required knowledge of VR controller functions, raycasting, diegetic UIs, and waypoint navigation.

Volunteer, Digital Nest

Watsonville, CA — Arduino C — Spring 2017

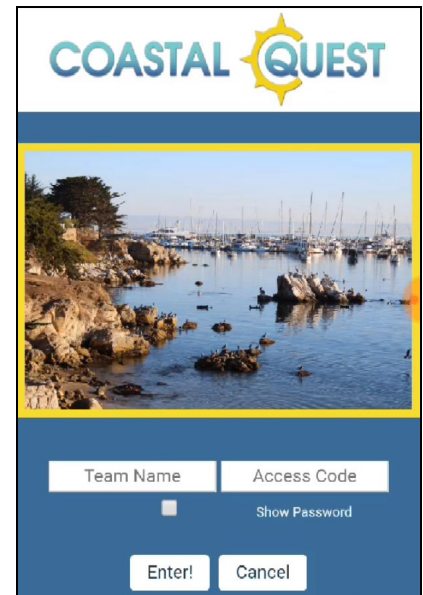
- Co-designed a basic programming course to expose underserved high schoolers to computer science.

SELECTED COURSEWORK

Walking and Biking Scavenger Hunts, Coastal Quest

Capstone — Javascript, Python, JSX, SQL, bash — Fall 2017

- Developed the registration and winner announcement systems for a mobile-friendly web application, touching all components of the program: the client, server, database, and payment systems.
- Developed scripts in bash to automate application and database build processes.
- Worked with a team to integrate the aforementioned systems into a project for a local client — a complete web application that allowed users to play through local scavenger hunts for prizes.
- Technologies used: React UI library, Flask application framework, Socket.IO communication library, PostgreSQL database, Stripe payment API, SHA-256 encryption, Heroku deployment platform



Software Design

Java, XML, SQL — Spring 2016

- Developed a library management system for Android that would let users access multiple common functions over the internet, such as placing a book on hold and reserving a checkout time.
- Technologies used: Android Studio, SHA-1 encryption, MySQL database
- Course skills: Android development, software design, design patterns

Other courses

- Intro to Computer Networks (Python), Graphics Programming (C++, DirectX), Game Engine Programming (C#, Unity), Advanced Game Programming (C#, Unity), Operating Systems (C, bash), Computer Architecture (C, MIPS), Computer Algorithms (C++), Multimedia Design and Programming (Python)

Achievements

- Scored in the 98th percentile on the ETS Major Field Test for Computer Science.