



SKILLS

- C++
- Visual Studio
- Unreal Engine 4
- Unity
- Gameplay programming
- Optimization
- Tools programming
- Combinatorics/Statistics
- 3-D Math
- Quick learner
- Problem solver

EMPLOYMENT

- **Gameloft NYC** (August 2014 – July 2015)
 - Programmed for the iOS games *Spider-Man Unlimited* and *Cars: Fast as Lightning*; primarily gameplay, UI and tools programming, and build / resource optimization
 - Worked mostly in C++ / Visual Studio, some in objective-C / XCode for device builds, as well as in Flash CS5 / JSFL / ActionScript for UI tasks and C# / WPF-based tools
- *Survey of Calculus and Intro to Statistics Teaching Assistant*, Fall 2011 & 2012, Spring 2013
 - Held office hours, conducted one-hour review sessions and administered quizzes on a weekly basis; graded papers and held additional review sessions before tests
- *Vanderbilt A&S Tutoring*, Fall 2012
 - Held weekly tutoring sessions for second-semester calculus and introductory physics

EDUCATION

Florida Interactive Entertainment Academy, Orlando, FL

Master's in Interactive Entertainment, December 2014

- Programming track, including Fall 2014 internship at Gameloft
- **3.925** GPA

Vanderbilt University, Nashville, TN

Bachelor's of Science in Mathematics, May 2013

- Minor in general Music with piano emphasis at Vanderbilt University's Blair School of Music
- **3.80** GPA; on Dean's List for eight consecutive semesters
- Scored a 163 on Verbal Reasoning and 169 on Quantitative Reasoning sections of GRE
- Recipient of the Arkansas Governor's Distinguished Scholarship, highest award for academic achievement in the state of Arkansas

PROJECTS

- *Spider-Man Unlimited* – Gameplay / General Programmer (Feb – July 2015)
 - Endless runner based on the *Spider-Man Unlimited* universe; released for iOS, Android, Windows Phone, over 50 million total downloads, received Editor's Choice on iOS App Store
 - Worked on game flow, configuration tool, and server, UI, and configuration glue code for large-scale "Alliance" team competition game mode; implemented many build / resource optimizations, including adding support for Flash shared libraries to GameSWF C++ / Flash middleware library
- *Cars: Fast as Lightning* (iOS) – Gameplay / General Programmer (Aug 2014 – Jan 2015)
 - Racing / tycoon game based on Disney/Pixar's *Cars* franchise; released for iOS, Android, Windows Phone; received Editor's Choice on iOS App Store
 - Worked on game flow, configuration tool support, and UI glue code for Daily Login Bonus system; prototyped variations on car AI / track layout system in freestanding test module



PROJECTS (CONTINUED)

- *Focal Length* – Gameplay, UI, Tools Programmer (Jan – July 2014)
 - “Capstone” project of FIEA master’s curriculum, built using Unreal Engine 4
 - Developed in-engine camera animation tool, programmed a versatile system for dispatching in-game objectives and metrics tracking in UE4’s Blueprints system, primary UI / HUD programmer, programmed projectile / vehicle targeting logic
- Data-Driven Game Engine (Spring – Summer 2014)
 - A C++-based game engine that utilizes a number of common software design patterns, and supports dynamic population of entities from XML data.
 - Includes support for parsing algebraic, comparison, and assignment expressions from XML, including referencing and changing variables of spawned entities.
 - Contains a simple DirectX 11 rendering and animation framework.
- *TowerPaul* (*Towerfall: Ascension* clone) – Tools / Utilities Programmer (April 2014)
 - A C++-based PC game for 4 players using a data-driven game engine, for FIEA professor Paul Varcholik’s Programming II class
 - Integrated expression code from my game engine; serialized / deserialized level layout data, and created an event-driven, FMOD-based audio manager.
- *Divide & Conquer* – Gameplay / Graphics / UI Programmer (Spring 2014)
 - A 2D, networked Unity-based educational game that reinforces skills of factoring integers, for FIEA professor Tom Carbone’s GameLab class
 - Programmed main gameplay logic and game loop, factoring logic, dynamic population of sprites and GUI elements.
- *Mario Bros. Classic* port – Tools / Utilities / HUD Programmer (Nov – Dec 2013)
 - A C++ game for PC and XBOX, for Tom Carbone’s Programming I class
 - Programmed PC-specific input, drawing, and audio utilities, deserialized level data, programmed HUD elements and bonus stage / level-progression logic.

EXTRACURRICULAR ACTIVITIES

- Arranged and performed music on a regular basis for Orlando Grace Church
- Arranged, performed, recorded, secured licensing rights and published two albums of video game music solo piano covers, “Video Game Variations” 1 & 2, available on Loudr.fm, iTunes, Google Play, and Spotify
- Member of Vanderbilt’s Victory a Cappella since Spring 2012 – 2013 and Vanderbilt University Concert Choir Fall 2012 – Spring 2013, arranged music for both groups
- Participated in Faulkner County Chamber Music Festival in summer of 2007 and 2008
- Went on mission trips and performed various types of volunteer work with the Baptist Collegiate Ministry at Vanderbilt Place during spring break and fall breaks of 2010 – 2013
- Participated in various activities with the International Friendship Outreach program at University of Central Arkansas from 2006-2010
- Earned highest Arkansas score on the American Mathematics Competition AMC 10B test in 2007 and AMC 12B in 2008A