

H BOWMAN-TRAYFORD

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SOFTWARE ENGINEER

Passionate professional with 5 years of experience developing mobile and desktop software as owner of Renegade Applications, LLC and a member of Gamkedo game development club. Known for building strong teams in collaborative environments – any size, local and remote. Excel at solving complex technical problems. Capable of independent work without supervision. **Possess a Top-Secret Security Clearance.**

EXPERTISE

- JavaScript / HTML5
- Visual Studio Code
- Coda2 / Xcode
- iOS (Objective-C / Swift)
- Safari / Chrome
- OpenGL-ES / WebGL
- Phaser
- Node.js
- Responsive Web Design
- Leadership / Teamwork
- Problem Solving
- Communications

RELEVANT EXPERIENCE

JavaScript/HTML5

- Led two online, world-wide teams of more than 30 developers, artists and musicians in the development and release of two web games using HTML5 Canvas and JavaScript as a member of Gamkedo game development club.
- Planned the scope, wrote the schedule, led testing efforts and made decisions about code design, architecture and refactoring to balance technical debt against required functionality, releasing two feature complete games on schedule in accordance with initial time estimates.
- Used Coda2 and Visual Studio Code IDEs to develop state management logic to display game over, high score and options scenes as well as multiple game levels. Additionally, implemented the systems necessary to display animated images on screen and render a pseudo-3D view using HTML5 and JavaScript.
- Contributed code and art to more than six games led by other club members including implementation of UI components, game modes, complex collision detection and WebGL.
- Released a downloadable game using Node.js and the Phaser JavaScript game engine as a solo project, including game design and logic, art and code.

Mobile Development

- Released two native mobile applications to the iOS App Store using Xcode, Objective-C and Swift. Completing all game/level design, art, collision and gesture detection and requirements for submission to the iOS App Store as a solo developer.
- Fed gyroscope and accelerometer data to OpenGL-ES from Objective-C to display the spatial orientation of the game world and provide user feedback.

EDUCATION & TRAINING

- Master of Art in National Security and Strategic Studies, Naval War College
- Master of Engineering in Engineering Management, Old Dominion University
- Bachelor of Science in Mechanical Engineering, Utah State University
- Leadership and Ethics Training – 304 Hours
- Naval Nuclear Propulsion Plant Operations (Master's level) – 1,560 Hours
- Personnel Distribution (Human Resources) – 2 years

EXPERIENCE TIMELINE

UNITED STATES NAVY

September 1998 – Present

Led teams of up to 300 personnel in the operation and maintenance of steam and gas turbine machinery, tactical electronic and weapon systems and conducted training on technical, tactical and administrative subjects. Wrote and approved long and short-range schedules. Recommended and executed punitive and administrative personnel actions including responses to Inspector General and Congressional inquiries.

OWNER – RENEGADE APPLICATIONS, LLC

January 2013 – Present

Wrote and executed the core business strategy. Developed, published and provided marketing for three released projects resulting in over 7,000 downloads. Used Xcode and Coda2 for Objective-C, Swift and JavaScript programming. Other design tools included Google Sketchup for 3D modeling, Photoshop for image manipulation and Audacity for audio. Integrated Facebook, Twitter and deeplinks.

MEMBER – GAMKEDO CLUB

January 2018 – Present

Pitched, led, provided weekly progress updates on and released two complex projects using JavaScript and HTML5 Canvas. Provided critical specifications and approved storyline contributions. Made significant programming contributions to more than six released projects involving dozens of contributors working remotely from around the world.

PUBLISHED ARTICLES

Phaser to iOS without PhoneGap or Cordova

- **First steps** (featured on Gamasutra and Phaser World) - <https://tinyurl.com/phaser-to-ios>

- **Touch & Sound** (featured in Phaser World) - <https://mادميمي.com/p/937c9b>

A Practical Use for Recursion in Game Development - <https://tinyurl.com/recursion-in-gameplay>

The Tutorial Two Step - <https://tinyurl.com/tutorial-two-step>

RELEASED PROJECTS

G-Type (Project Lead) - <https://gamkedo.itch.io/g-type> - Built and pitched initial prototype. Provided weekly progress updates documenting contributions from 32 team members across 12 time zones (<https://tinyurl.com/g-type-playlist>). Designed and programmed the player score system and pop ups, six power ups, efficient polygon/polygon collision, screen shake, behavior for eight enemies, checkpoint/continue/menu/UI systems and designed and programmed three cutscenes and two game levels. Contributed artwork for five enemies, three power ups and several pieces of environment art.

Dream Racer (Project Lead) - <https://gamkedo.itch.io/dream-racer> - Built and pitched initial prototype and provided weekly progress updates documenting contributions from 23 team members across 12 time zones. Programmed in-game level editor, core gameplay, pseudo-3D appearance, background parallax, time limit and collision detection. Designed two levels, created and integrated dozens of pieces of artwork.

Word Fall (Solo Developer) - <https://renegadeapplications.itch.io/word-fall> - Authored all art, programming and design using Photoshop and the Phaser JavaScript game engine. Incorporated Node.js to produce a downloadable executable for Windows and Mac.

Code Fall / Cover The Core (Solo Developer) - <https://tinyurl.com/code-fall> / <https://tinyurl.com/cover-the-core> – iOS Applications developed using Xcode, Swift, Objective-C, OpenGL-ES and Apple's Sprite Kit. Authored art, programming, design and sound effects. Integrated with Facebook, Twitter and deeplinks.