

Michael Feldman

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Proficiencies	Programming Languages C++, C#, Haxe, Python, Perl, Cg, HLSL, SQL, Bash, C, Unreal Blueprints, Java, Lua, Ant, Typescript, Javascript, HTML, CSS, XML, YAML, Go, FORTRAN Software Unreal, Unity, Godot, Reddis, DynamoDB, Node.js, Bootstrap, Jenkins, Visual Studio, Rider, VSCode, Vim, WSL, Git, Perforce, Svn, Chrome, Firefox, Jira, Office, Wwise, Sibelius, Audacity, Wireshark, CharlesProxy, RenderDoc, Imagemagick Environments Windows 10/11, Linux, Mac OS X, Xbox One, PS4, Switch, Android, iOS
Professional Experience	Spry Fox, a Netflix Studio Senior Software Engineer Remote 2023-2024 <i>Cozy Grove: Camp Spirit, Untitled Cozy MMO</i> <ul style="list-style-type: none">• Led an interdisciplinary optimization strike team to improve mobile device battery life• Worked with Netflix's automation team to create a C++/Python test framework for mobile Unreal games• Adapted a Bootstrap Javascript/HTML item data visualizer for use by game designers in development of a different product• Converted the item visualizer from Javascript to Typescript for maintainability• Created a quest data visualizer, allowing designers to manage pacing and rewards
	Proletariat, a Blizzard Studio Lead Software Engineer Boston, MA 2022-2023 <i>World of Warcraft: Dragonflight, World of Warcraft: Wrath of the Lich King Classic</i> <ul style="list-style-type: none">• Rewrote Proletariat's engineering hiring process to be more inclusive, more equitable, and less stressful• Ran mock interviews to train interviewers and refine the new hiring process• Supervised a group of 7 as they fixed bugs and onboarded onto the World of Warcraft team• Presented the SQL language and relational database concepts to Proletariat's engineering team• Managed 3 direct reports• Planned, gained approval, staffed, and began an initiative to improve audio workflows and features• Organized a second initiative to analyse and fix "magic numbers" across 100,000 Lua scripts• Created a Typescript plugin for VSCode to improve creation of Lua scripts, saving hundreds of hours per year
	Proletariat, Inc. Senior Software Engineer Boston, MA 2018-2022 <i>Spellbreak</i> <ul style="list-style-type: none">• Presented best practices for multiprocessor programming, practical language features, and code reviews• Became an expert on Haxe, Node.js, and Unreal (C++) language intricacies• Took on a direct report, earning excellent feedback from that engineer and management• Guided an interdisciplinary group with no previous Unreal editor experience through a series of tutorials• Implemented a variety of tools and features including a persistent cosmetic inventory, a ledger-backed currency system with no known exploits, voice chat using Vivox middleware, a UI menu system, weekly store offers, testable scheduled content, an open source C++/Python Unreal plugin that converts spreadsheets to Unreal assets, colorblindness accessibility options, and a live-tunable competitive player ranking system• Collaborated with product owners, UI designers, producers, and QA to fit my features into a cohesive product• Wrote efficient Haxe/Node.js backend code that scaled to 7 million unique users in our first week• Addressed a preexisting architectural caching issue before it could lead to race conditions and lost user data• Ramped up on the Go language for contract work on another studio's backend
	Turbine, Inc. Software Engineer Needham, MA 2017-2018 <i>Game of Thrones: Conquest</i> <ul style="list-style-type: none">• Collaborated with multidisciplinary teams to create and polish features that were loved by players• Reviewed other engineers' code for correctness, clarity, efficiency, and maintainability• Fixed several C# thread synchronization and race-condition bugs• Added the ability to attach context to log messages, which reduced time spent identifying sources of bugs

Professional Experience, Continued	<p>The Tap Lab Software Engineer Cambridge, MA 2016-2017</p> <p style="text-align: center;"><i>WWE Tap Mania, Politicats</i></p> <ul style="list-style-type: none"> • Shipped fixes to bugs with minimal prior knowledge of the codebase within three days of beginning work • Presented Unity and C# knowledge and best practices from previous professional and personal experience • Wrote shaders to emulate Photoshop blend modes, allowing efficient control over palette-swapped environments • Added threaded loading to the Spine animation library • Demonstrated and encouraged the writing of tools for data generation, verification, and ease of editing assets • Implemented artists' UI mockups as responsive, functional, and animated in-game assets • Documented game systems in preparation for another company to continue to provide updates
	<p>GSN Games Software Engineer Boston, MA 2014-2016</p> <p style="text-align: center;"><i>Sparcade: Tripeaks Solitaire, Sparcade: Tetris Burst, Cosmic Crunch, The Price is Right: Super Plinko, Wheel of Fortune, Catch-21, Solitaire Rush</i></p> <ul style="list-style-type: none"> • Shipped three Javascript/HTML5/Node.js games optimized for mobile devices in five months • Improved maintainability through refactoring code written by an outside contractor • Fixed numerous visual, logic, and security bugs • Created a level editor for <i>Plinko</i> using Box2D physics that encouraged rapid design iteration • Contributed to an open source Javascript preprocessor • Instructed coworkers in Unity engine best practices and C# language features • Implemented an automatic solver for <i>Sparcade: Tripeaks Solitaire</i> in order to classify difficulty of random seeds • Assisted in architecting a server-configurable UI for the <i>Sparcade</i> game launcher
	<p>Harmonix Music Systems Software Engineer Cambridge, MA 2010-2013</p> <p style="text-align: center;"><i>Canceled Kinect game, Fantasia: Music Evolved, Chroma, Dance Central 3, Rock Band Blitz, Dance Central 2, Rock Band 3, Dance Central</i></p> <ul style="list-style-type: none"> • Automated preview generation to speed the creation of DLC for <i>Rock Band</i> and <i>Dance Central</i> games • Added sound buses and positional audio with custom falloff curves to Harmonix's C++ audio engine • Prototyped combat and locomotion-based challenges for a canceled game • Coded a chase camera that designers and artists could tune and script • Added optional reliable transmission to UDP protocol for a simultaneous multiplayer prototype • Created flocking AI movement by implementing an optimized and expanded version of the Boids algorithm • Replaced some of Harmonix's general purpose visual scripting for audio with Wwise middleware • Instructed audio team on in-engine implementation, allowing them to iterate independently • Integrated Harmonix's sound synthesizer into Unreal 3, Unreal 4, and Unity • Collaborated with a contracted studio remotely to bridge the knowledge gap between programmers and musicians • Triggered various gameplay systems at appropriate musical timings using MIDI's authored by audio designers
	<p>Mythic Entertainment, an EA studio Intern Fairfax, VA 2009</p> <p style="text-align: center;"><i>Warhammer Online, Dark Age of Camelot</i></p> <ul style="list-style-type: none"> • Fixed bugs in the Java tool used by customer support representatives (CSRs) • Added statistics tracking of CSRs • Allowed CSRs to subscribe to be notified when specified players log on • Implemented an in-game survey used by players to give feedback on their interactions with CSRs
Personal Projects	<ul style="list-style-type: none"> • Implemented a low-level networked messaging system suitable for a turn-based tactics game • Generated meshes and wrote custom Cg shaders to visualize the movement of 2D units across varying altitudes • Combined A* and Monte Carlo Tree Search to create a compelling AI opponent • Designed, programmed, composed, and performed music for a puzzle game
Education	<p>Brown University Sc. M. (Master of Science) in Computer Science Providence, RI 2009-2010</p> <p>Brown University Sc. B. (Bachelor of Science) in Computer Science Providence, RI 2005-2009</p>
Interests	Member of saxophone ensemble "Saxyderms," video and board games, jazz, classical, bluegrass, and video game music, model rocketry, skiing, escape rooms