

# JOANNE HOAR



linkedin.com: joanne-hoar



github.com: xcodegirl

## Senior Software Developer

### WHO AM I?

Canadian Software Developer with 20 years of experience in video game programming, scientific modelling and cross-platform development. Expertise in multiple programming languages, game engines and SDKs. Proven track record in leading teams, mentoring developers, impressing customers and building corporate culture. Strong background in C++, Unreal Engine, iOS and Android using agile methodologies and CI/CD. Passion for algorithmic correctness, mathematics and artificial intelligence.

### EXPERIENCE

- |                          |   |  |
|--------------------------|---|--|
| 2022 – present           | <b>Senior Software Developer</b><br>Developing and maintaining cross-platform client API for BaaS to add gamification and real-time multiplayer tech for AAA and Indie Studios. Developing and releasing demo games and projects. Engineering and maintaining CI/CD and TDD pipeline. Responding to customer issues and feature requests.<br>Unreal Engine / C++ / Objective-C, Swift / iOS / Android Native / Java / PlayStation / Node.js / Groovy / C# (Unity, Godot) / Shell Script / MacOS / Windows / Linux | <b>bitHeads Inc.</b>   |
| 2011 – 2022<br>part time | <b>Co-founder/ Lead Developer</b><br>Designing, coding and publishing nine games to commercial app stores for mobile devices. Experimenting with cutting edge device tech and SDKs.<br>Unreal Engine / Objective-C / Swift / iOS / Android Native / Kotlin / Augmenting Reality / MacOS / Windows   | <b>Silicon Hanna Inc.</b>  |
| 2008 – 2011              | <b>Tools Programmer</b><br>Developing tools using mathematical modelling to maximize production and improve efficiency for major oil & gas corporations. Leading research on a new system to reduce build times by 40%.<br>C++ / MFC / Windows  | <b>Fekete Associates Inc. (S&amp;P Global)</b>                             |
| 2005 – 2008              | <b>Intermediate Software Developer</b><br>Visualising in-line device data with OpenGL graphics. Implementing neural network algorithms for anomaly detection. Leading development of custom web-based GIS reporting software. Improving low-level programming algorithms for data processing.<br>C++ / C / OpenGL / PHP / SQL / Neural Networks / Borland / Windows / Linux   | <b>BJ Pipeline Inspection Services Inc. (Baker Hughes)</b>                 |
| 2005 – 2008<br>part time | <b>Self-employed / Contractor / Instructor</b><br>Creating and publishing physics-based games for iOS. Technical writing, web development, google maps and firebase integration and server administration. Developing course curriculum, instructing C++ programming and assessing student work with Department of Continuing Education.<br>C++ / C / OpenGL / PHP / SQL / Neural Networks / Borland / Windows / Linux  | <b>SuRJE Software Solutions Inc.</b>                                       |
| 2005 - 2006              | <b>Software Researcher / Lead Developer</b><br>Lead developer and system administrator for an iTunes like music store. Automating DRM encoding and video streaming. Developing a prototype for a Google competitive search engine.<br>C++ / PHP / Javascript / .NET / Windows / Linux   | <b>PlayStarMusic Corp.</b>   |
| 2004 - 2005              | <b>Junior Software Engineer</b><br>Porting applications to operate under a new GUI library. Developing user interfaces for software lifecycle automation.<br>C++ / Shell script / Windows / Unix / Qt / Wx  | <b>Codefast.com</b>  |
| 2001 - 2004              | <b>Research Assistant</b><br>Developing graphics software tools using fractal math and biological modelling. Managing network setup and code base for distributed computing. Participating in interdepartmental projects, publishing five research papers, leading student tutorials and marking assignments.<br>C++ / OpenGL / Solaris / MacOS / Unix / Linux / PHP / MySQL / Qt   | <b>VLab Computer Graphics Group / Artificial Intelligence Research Hub</b> |

## EDUCATION

2002 – 2004	<b>Master's Degree</b> Computer Science <i>Thesis Title: Agent-based Development of Natural Transportation Networks</i>	University of Calgary
1998 – 2001	<b>Bachelor's Degree</b> Computer Science	University of Calgary

## COMMUNITY OUTREACH

- Vice President / Casino Coordinator, Hanna Figure Skating Club, 2024
- Costume Coordinator, Stage Hanna Junior, 2024
- Women of bitHeads and Cookbook Committee, bitHeads, 2024
- Team Manager/Assistant Coach, U11 Soccer, 2024
- Dryland Training Coordinator, Hanna Figure Skating Club, 2022 - 2024
- 4-H Public Speaking Judge, District Level Competition, 2022
- Computer Programming for Kids, J.C. Charyk School, 2019 - 2021
- Reading Program, Our Lady of Fatima School, 2016 - 2018
- Preschool Gym Leader, YMCA, 2013 - 2014
- OpenGL Elective Instructor, Fekete Associates, 2010
- Calgary Corporate Challenge, 2007 - 2008
- Ladies Golf and Luncheon Club Coordinator, BJ Pipeline Inspection, 2006 - 2008
- SCIBerMENTOR, 2002 - 2005
- President, Computer Science Graduate Society, 2002 - 2003
- VP Academic, Computer Science Undergraduate Society, 2001 - 2001


## AWARDS

- Departmental Nomination: Governor General's Gold Medal, Faculty of Graduate Studies, 2005
- Postgraduate Scholarship NSERC D3, Natural Sciences and Engineering Research Council of Canada, 2005
- Graduate Student Scholarship, Alberta Learning, 2004
- Best Student Paper Award, ACAL 2003
- CPSC Departmental Research Award, University of Calgary, 2003

## LANGUAGES

**English** - native  
**French** - proficient  
**Spanish** - rudimentary

## WORK SAMPLES

 [github.com: xcodegirl/career](https://github.com/xcodegirl/career).

## PUBLISHED GAMES

- Ragin' Bull - iOS, Android (2020)
- AR Picture Portal - iOS (2018)
- Fragmented Reality - iOS (2018)
- IceCream AR - iOS (2018)
- Jewel Slide - iOS (2017), Android (2019)
- Word Slide & Find - iOS (2017)
- A Word Theme - iOS (2017), Android (2019)
- CryptoQuip - iOS (2011), Android (2019)
- Rafter's Loot - iOS (2011)
- Star Chase - iOS (2008)
- Bitsy - iOS (2008)