

# Caleb Howard

(778) 999-6817 | calebjhoward@gmail.com | West Vancouver, BC

## SUMMARY

- Delivered 30+ AAA film titles, and 20+ game titles - receiving awards for technical and artistic achievements, and receiving patents for solutions developed.
- Senior Artist, Technologist, and Mathematician with 25+ years of development and production experience delivering innovative technical and visual solutions against challenging schedules and budgets.
- Exceptional skills in the application of technical analyses and development - in the creation of effective representations, and in the communication of complex abstract ideas through visual media.
- Engaging leader of Technological and Artistic endeavours - especially on projects which integrate aspects of both. Able to bring the best out of teams by giving members ownership of their work - allowing their personal passions to drive team objectives.
- Excellent communication skills - adept with the language and ideas of technology and of visual representation, with a strong capacity for presenting the ideas of the one using the lexicon of the other.
- Process analyses and optimization. General problem solver capable and conversant at all levels of technology, from gate-logic to hardware to software to human-computer interface. Able to chart overarching paths to solutions which draw upon the expertise of diverse disciplines to arrive at efficient and effective solutions for a broad range of fields.
- Advocate / Evangelist. Using genuine, infectious and disarming enthusiasm to draw an audience to new understanding by learning their position, and demonstrating where their perspective aligns with the new idea being presented.

## PROFESSIONAL EXPERIENCE

### Koan Designs

2016 - Present

*Co-Founder - Senior Mathematician / Technologist / Data Scientist*

- Start-up focusing on Machine Learning applications and Virtual Reality experiences

### Electronic Arts

2016

*Product Owner: Content Advanced Team*

- Determined stakeholders, Defined objectives, Set priorities, and Scheduled development for an advanced Research and Development team with members in Sweden, the US, and Canada, in supporting a central content group.

### Electronic Arts

2014 – 2016

*Senior Computer Graphics Supervisor / Inventor*

- Recruited and led a seven-person international Content Advance Team responsible for developing technology that contributes to games such as **FIFA, Madden, NHL, UFC, NBA, Need for Speed, Battlefield** and **Battlefront**.
- Led the development of technical projects utilizing hybridized Machine Learning algorithms, resulting in efficiency gains typically >90%.
- Created technical strategy in alignment with product roadmap to deliver high quality, cost-effective and timely products
- Contributed to and named in patent - “Producing a Three-Dimensional Representation Based on Images of a Person”.
- Led a 70-member, EA-wide Procedural Council focused on collecting and distributing best-in-class tools.

- Promoted Machine Learning approaches to data representation and transformation delivering keynote talk at NUCL.AI (Artificial Intelligence conference) in Vienna, Austria.
- Marshalled support and collaboration in the development of technology to support diverse needs across many teams in several countries.

## **Electronic Arts**

2008 – 2014

### *Computer Graphics Supervisor*

- Grew awareness, and support for Procedural Production methods in improving efficiency, consistency, and quality of digital content across the global EA organization, and within the industry.
- Directed a team, and provided key contributions in developing technology providing specific wins demonstrated in Environments (Scene photogrammetry, Procedural road systems, Architectural systems, Terrain systems).
- Designed and developed technology in support of Character production (Facial likeness, Rigging, Physical modelling, Hair systems).
- Oversaw development of Lighting tools (Global illumination optimization, Compositing).
- Directly developed techniques for representing Surfaces (Shaders, Frequency-based texture synthesis).

## **Heavy Iron.**

2007 – 2008

### *Technical Art Director*

- Developed technology and pipelines in support of Visual Effects under challenging resource constraints.
- Developed Visual Effects for Narrative video games.
- Delivered titles on a challenging budget and schedule (**Wall-E, Up**).

## **Sony Pictures Imageworks**

2005 – 2007

### *Computer Graphics Supervisor*

- Developed technology and pipelines in support of Visual Effects for Feature Films. (Fire simulation, Fluid Flow simulation, Bioluminescence)
- Led teams of Digital Artists in the production of Visual Effects
- Delivered key Visual Effects elements
- Credits include **Ghost Rider, Beowulf**.

## **Rhythm and Hues**

1999-2005

### *Computer Graphics Supervisor*

- Developed technology and pipelines in support of Visual Effects for Feature Films.
- Led teams of Digital Artists in the production of Visual Effects
- Delivered key Visual Effects elements
- Credits include **Superman Returns, Elektra, The Chronicles of Riddick, The Cat in the Hat, Gigli, X-Men 2, Daredevil, The Sum of All Fears, Cats & Dogs, Red Planet, The 6th Day, Battlefield Earth, What Planet are you From?, Stuart Little**.

## **Blue Sky / VIFX**

1997-1999

### *Senior Technical Director*

- Developed technology and pipelines to deliver Visual Effects for Feature Films.
- Credits include **End of Days, Mystery Men, Austin Powers; The Spy Who Shagged Me, Blade, Armageddon**.

## **Square**

1995-1997

*Software Engineer*

- Implemented the game compiler for the Game Parasite Eve, including full implementation of Lexical Analysis, Parsing Constant folding, and Compiling to opcode for the Game **Parasite Eve**.
- Developed Techniques and pipelines for Visual Effects elements.

## **Digital Domain**

1993-1994

*Technical Director*

- Developed first Procedural Anatomy System (simulation of bone, muscle, fat, and skin tissues for representation of human characters).
- Developed technology and pipelines to deliver Visual Effects for Feature Films.
- Credits include **True Lies, Colour of Night, Interview With the Vampire, Apollo 13, Strange Days, T2-3D; Battle Across Time**.

## **EDUCATION**

**Udacity**, Advanced Artificial Intelligence and Machine Learning techniques

**University of Waterloo**, Bachelor of Mathematics

**Rhythm and Hues Educational Program**, Managing Software Development, Difficult Conversations