

BEN HUMBERSTON

bhumberston@gmail.com | www.benhumberston.com

PROFESSIONAL SUMMARY

Senior software engineer creating powerful systems, tools, and user experiences. Application development across desktop, VR, web, and cloud. 8+ years professional experience with C++. Diverse technology background in video games, computer graphics, telepresence, and haptics. Cross-team collaborator delivering strategic value through engineering best practices.

INTERESTS

- VR, computer graphics, game development, developer tools
- Real-time communication, telepresence, networking
- Machine learning and scalable cloud applications

EXPERIENCE

- Software Engineer** Feb 2018 – Present
Meta Platforms, Inc. (formerly Facebook, Inc.)
Pittsburgh, PA
AR/VR telepresence research & development in Reality Labs group.
C++, Python, C#, Hack/PHP, GL, Pytorch.
- Principal Engineer** Apr 2017 – Jan 2018
Senior Software Engineer Sep 2014 – Apr 2017
Autodesk, Inc.
Pittsburgh, PA
Desktop and cloud feature development for “ReCap” 3D scan processing software.
UI/UX, data management, rendering optimizations. C++, Qt, OpenGL, Node.js, Python, C#.
- Graduate Assistant, PhD program** Sep 2013 – Jul 2014
Carnegie Mellon University
Pittsburgh, PA
Research on data-guided computing and applications of machine learning to animation.
C++, Python, OpenGL, Android.
- Software Engineer** Aug 2009 – Apr 2011
Electronic Arts (EA 2D studio)
Redwood Shores, CA
Developer on web-based *Dragon Age* titles. Gameplay systems, AI, and graphics. AS3, Java.
- Software Engineering Intern, Electronic Arts (Maxis studio)** Summer 2008
Software Engineering Intern, Oracle Summer 2007

EDUCATION

- MS, Computer Science** Sep 2014
University of British Columbia
Vancouver, BC
Thesis: *Precision Manipulations Using a Low-Dimensional Haptic Interface*
Teaching assistant for courses in functional programming and AI.
- BS, Computer Science** May 2009
Cornell University
Ithaca, NY
Computer graphics and game development focus

SKILLS

- Computer graphics, 3D math, interactive applications, game development
- Multithreaded and multi-process applications
- RTC, distributed client/server systems, web APIs
- *Current tools:* C++, C#, Python, OpenGL
- *Past tools:* Node.js, Qt, Visual Studio, MATLAB, GLSL, AS 3.0, Flex, MongoDB,
- *Development Platforms:* Windows, Linux, Android

PUBLICATIONS

- B. Humberston and D. K. Pai. *Hands On: Interactive Animation of Precision Manipulation and Contact*. Best Paper award, SCA 2015. Los Angeles, CA.
- M. Stanton, B. Humberston, B. Kase, J. F. O'Brien, K. Fatahalian, A. Treuille. *Self-Refining Games Using Player Analytics*. ACM SIGGRAPH 2014. Vancouver, BC.
- B. Humberston and D. K. Pai. *Precision Manipulations Using a Low-Dimensional Haptic Interface*. MS thesis, University of British Columbia. Vancouver, 2014