Logan Gilmour

9506 72 Ave NW
Edmonton, AB T6E 0Y4

1 (780) 999-1998
legilmou@ualberta.ca

Education

B.Sc. Honours Computing Science
June 12, 2013, with First Class Honours
University of Alberta, AB, CA
GPA: 3.48, Major: 3.60

M.Sc. Computing Science
January 2019 - Present
University of Alberta, AB, CA
Current GPA: 3.93

Experience

Self Employed

September 2020 - Present
Refining photogrammetry software for a pilot project funded by SSRIA in collaboration with Butterwick Projects Ltd. Providing geometric reconstructions of three single-family homes with photographs shot via drone using the developed photogrammetry software. Accepted into imYEG commercialization accelerator.

Graduate TA/RA

January 2019 - Present
University of Alberta

Responsible for grading assigments and exams, and assisting students during office hours. Conducting research on methods for reconstructing geometry from images, with a focus on building facades.

Mitacs Accelerate Intern

January 2020 - May 2020
Butterwick Projects Ltd. via University of Alberta

Worked to ascertain feasibility of a photogrammetry-based approach for developing as-built 3D models of buildings to support prefabricated exterior energy retrofits. Conducted a literature review of building reconstruction techniques, operated cameras on site, worked with existing photogrammetry software, and built a proof-of-concept software parametrizing the reconstruction optimization in terms of planar rectified geometry.

Cofounder, Software Developer, Game Designer

January 2015 - Present
ThirtyThree

Built the game RunGunJumpGun for PC/Mac/iOS/Android/Nintendo Switch using Unity3D. Designed a cellular automata system for procedurally aided level design. Developed a palette-based sprite rendering system. Built a custom collision detection system. Designed many of the game's levels. Wrote code to procedurally generate art assets. Implemented a promotional website. Integrated with Steam, iOS, Android, and Mac App store for achievements and leaderboards. Added analytics and wrote R scripts for statistical analysis of user playthroughs to improve difficulty progression. Built a prototype Virtual Reality Game with funding from the Canadian Media Fund and Alberta Interactive Digital Media Grant. Designed levels, built volumetric light system optimized for VR with single-buffer temporal stereo reprojection, designed gameplay systems.

Graphics Programmer

December 2014 - May 2016, January 2017 - September 2017
ScopeAR

Built several Augmented Reality step-by-step instructional applications using an in-house tool built on top of Unity3D. Rebuilt the animation system at the core of that tool to create a robust and intuitive authoring tool for step-by-step instructional content that is targeted toward users of limited technical ability. Designed a variety of shaders and rendering techniques that can highlight or deemphasize content in an aesthetically pleasing way, and a system for applying these visibility modifiers in a hierarchical way. Developed a content management system that accesses and downloads that content via the internet. Developed a technique for drawing on a mesh generated from a depth-camera point-cloud in real-time Augmented Reality. Built a pipeline for encoding and transmitting video mixed with augmented reality data in real-time.

Software Developer

Jan 2014 - December 2014
Sticks & Stones

Developed a variety of interactive websites using Javascript, CSS, and HTML. Built several custom Wordpress deployments. Designed and developed a prototype networked collaborative drawing tool.

Undergraduate Research Assistant

May 2012 - September 2013
Service Systems Research Group, University of Alberta, Dr. Eleni Stroulia, Dr. Sarah Forgie

Designed and implemented a prototype web-based e-learning tool that logs all user interactions using Clojure, ClojureScript, CouchDB, and Tomcat. Developed a prototype tool that generates interactive HTML from RDF. Full-time during the summers of 2012 and 2013, and part-time during the school year.

Teaching Assistant

Jan 2012 - May 2012
CMPUT 297: Introduction to Tangible Computing II, University of Alberta, Dr. James Hoover, Dr. Michael Bowling

Aided students in learning course content during office hours, and graded programming quizzes and assignments.

Software Development Intern

May 2011 - Dec 2011
Health Care Aids and Technology project funded by Alberta Health and Wellness, Dr. Lili Liu

Designed and implemented a prototype application for scheduling Health Care Aids, using Google Web Toolkit, Tomcat and PostgreSQL for scheduling application and PhoneGap for a mobile app for schedule viewing and task completion. Also adapted this software to schedule medication reminders for a smart-pillbox based on an Arduino microcontroller.

Undergraduate Research Assistant

May 2010 - Dec 2010
The Service Systems Research Group, University of Alberta, Dr. Margaret Mackey, Dr. Eleni Stroulia

Designed and implement an XML-based language for developing iPhone-based interactive spatial ebooks in Objective-C, and developed a demo e-book using the language I developed. Designed and implemented a declarative language for web-scraping in Java. Developed a small tool to aid in digitizing health-care forms.

Self Employed

May 2010 - December 2013

Built several web-pages using PHP on shared Apache hosting. Built two web-applications with GWT running on Tomcat hosted on Amazon EC2.

Selected Projects

RunGunJumpGun for PC/Mac/iOS/Android (Video Game). http://rungunjumpgun.com 2016

"The Box" (VR Experience). https://vimeo.com/201581136 2016

Moustache of Ceremonies (Digital Puppet). https://vimeo.com/202081740 2015

Kasketball for PC/Mac (Video Game). https://thirtythreegames.itch.io/kasketball 2015

Exhibitions

"The Box", *Game Start*, Latitude Art Gallery, Edmonton, AB 2016

Publications

Gilmour, L.; Ray N.;, "Locating Cephalometric X-Ray Landmarks with Foveated Pyramid Attention," *Medical Imaging with Deep Learning* (pp. 262-276) PMLR 2020.

Abbey, B.; Alipour, A.; Gilmour, L.; Camp, C.; Hofer, C.; Lederer, R.; Rasmussen, G.; Lili Liu; Nikolaidis, I.; Stroulia, E.; Sadowski, C.; , "A remotely programmable smart pillbox for enhancing medication adherence," *Computer-Based Medical Systems (CBMS), 2012 25th International Symposium on*, pp.1-4, 20-22 June 2012
Gilmour,

Awards and Recognition

iOS App Store Editor's Choice - *RunGunJumpGun* 2016

Bit Bash 2016 Official Selection - *Kasketball*, Chicago, IL 2016

ACE Award 'Innovative Use of Technology' - *Moustache of Ceremonies*, Edmonton, AB 2015

NSERC Undergraduate Summer Research Award 2012

Dean's Honor Roll 2010-2011, 2011-2012, 2012-2013

Jason Lang Scholarship 2010, 2011

References available upon request