

Shane Celis

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Objective

I am interested in part-time software development work. My most recent work has been on video games and video-game-adjacent areas.

Publications

Celis, S., Hornby, G. S., Bongard, J. C. (2013) Avoiding Local Optima with User Demonstrations and Low-level Control. **2013 IEEE Congress on Evolutionary Computation**, Cancun, MX.

Celis, S., Bongard, J. C. (2012) Not All Physics Simulators Can Be Wrong in the Same Way. **2012 Genetic and Evolutionary Computation Conference**, pp. 659-660.

Education

University of Vermont — Computer Science, Evolutionary Robotics, Ph.D. Student† (2011–2013)

University of Sussex, UK — Evolutionary and Adaptive Systems, MSc

University of California, Davis — Computational Applied Science, BS

Honors

Prized Writing Recipient*

Dean's Honor List‡

First Year Scholar

† Left the program to apply the technology in video games

* Scientific and Technical category for essay, "Design With and Without Intelligence"

‡ Recognized for three terms

Computer Skills

I worked as a professional software developer in the California Bay Area for several years and continued to hone those skills in academia and now in game development technologies. I am proficient with the following programming languages: C, C#, High Level Shader Language (HLSL), Mathematica, Rust, and WebGPU Shading Language (WGSL).

Work Experience

Software Engineer, Transit Training Solutions; Ann Arbor, MI — 2023

I worked remotely to spin back up an existing Unity project. I was responsible for restoring a damaged git LFS, completing features without the original developers, and finishing the software portion of the product that resulted in successful delivery.

Community Engineer, Hack Club; Burlington, VT — 2022–2023

I split time between helping hack clubbers with their coding questions and writing embedded rust firmware¹ for their game console Sprig.

Video Game Programmer, Brandon Hyman's Untitled AR Storytelling Company; Los Altos, CA — 2017

I worked remotely with Joel Davis and Hyman's team to create an Augmented Reality (AR) prototype for Baobab Studios.

Video Game Asset Developer, Seawisp Hunter; South Burlington, VT — 2013-current

I work as an independent game developer in Unity 3D, making assets, and fun virtual robot toys that hint at artificial evolution.

¹ <https://github.com/shanecelis/trowel>

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Research Assistant, UVM; South Burlington, VT — 2011-2013

I worked with my advisor Josh Bongard on a variety of research, most of which focused on evolutionary robotics.

Research Assistant, UCSC; Santa Cruz, CA — 2008-2009

I worked part-time with Senior Scientist Dr. Gregory Hornby at NASA's Ames Research Center on interactive evolutionary algorithms research, which was funded by the National Science Foundation (award no. 0757532).

Software Engineer, FireEye; Menlo Park, CA — 2005-2007

I worked on the company's flagship product, both the front-end and the back-end, which were written in Ruby and C respectively.

Software Engineer, Sun Microsystems; Santa Clara, CA — 2003-2005

I did general software development (e.g., feature enhancements and bug fixes). Additionally, I proposed and presented unit testing practices to developers and managers that was accepted by our team.

Quality Engineer, Terraspring; Redwood Shores, CA — 2000-2003

I did software development on automated testing. I created the automated testing framework used within the company.

Other Activities

Meetup Organizer, Vermont Game Developers — 2015-2019

I organized the Vermont Game Developers meetup group. We met regularly for talks and show-and-tells.

Mini Maker Faire, Magic Maker — 2015-2019

I've participated in the Shelburne Farms' Mini Maker Faire the last four years. Most recently I ran a "Magic Maker" booth that came in second place based on visitors' votes.

Google Summer of Code Participant, Emacsy — Summer 2013

I proposed an Emacs-like embeddable library called Emacsy for Google Summer of Code and gave a talk about it at the GNU Hackers Meeting in Paris.

Author and Maintainer, uControl — 2000-2005

I wrote and maintained uControl as an open-source project; it let you remap caps lock to control for instance. It was featured in several magazines (e.g., it received 4½ out of 5 stars from Macworld in April 2004).

References

References available upon request.