Keith Simmons

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SUMMARY

I am a software developer with 10 years of experience developing interactive software for museums and other clients in a variety of languages.

SKILLS

- C# in Unity3D, .NET
- C++, Openframeworks
- Python
- AWS (EC2, RDS, SES, S3)
- MySQL, MSSQL, PostegreSQL
- Bash scripting, automation
- Arduino
- Raspberry pi
- Blender 3D
- Integration with headless CMS
- JSON driven dynamic web dashboards
- Version control (GitHub, bitbucket)
- PHP with mysql
- LAMP Linux server setup and configuration (apache, mysql, etc)

PROFESSIONAL EXPERIENCE

Boston Productions Inc, Norwood, MA — *Lead Software Developer*

Winter 2020 - Current

- Manage a small team of developers creating exhibits in Unity 3D with C#
- Lead development and software architecture on 16 interactive projects in the past year
- Interface Unity with headless CMS systems using serialized JSON
- Integrate Unity directly with AWS services using AWS SDK for .NET (S3, SES, RDS, and web services running on EC2)
- Interface Unity with hardware including RFID readers
- Organize agile development with my team using weekly JIRA sprints
- Responsible for architecture, deliverables, timelines, and documentation
- Support and troubleshooting for existing exhibits and infrastructure

Museum of Science, Boston, MA — *Interactive Software Developer*

Summer 2011 - Fall 2018

- **Bird's World Exhibit:**
  - Created Unity 3D prototypes for the new "Sneak" exhibit that teaches how bird calls work as alarm systems for the forest (alerting deer)
- **Charles River Gallery Exhibit:**
  - Co-developed a projection mapped interactive river table in Unity
  - Created a river buoy dashboard that updates in real-time from EPA, USGS, and other live data sources on a raspberry pi
  - Created 4k resolution time lapse video of the Charles River from high resolution DSLR photos using custom shell scripting

- **Hall of Human Life Exhibit:**
    - Visitor data driven exhibit with 15 unique measurement stations developed in C++ with openframeworks and MSSQL database
    - Created wireframes, prototypes, and exhibit software
    - Visitors see personal and public data via interactive, video-supported graphs in the museum and at home

Intel Computer Clubhouse Network, Boston, MA — *Technology Manager*

Spring 2008 - Winter 2011

- Oversaw technology infrastructure (web site, servers, databases)
- Developed and supported art & tech workshops for 100 locations worldwide through biennial summits in Boston and a website connecting clubhouses

ICE Lab @ RIT, Rochester, NY — *Lab Manager*

Fall 2007 - Winter 2008

- Setup and tested high speed video conferencing via Internet 2

Rochester Digital Ripple Project, Rochester, NY — *Educator*

Summer 2006, Summer 2007

- Created and executed a summer curriculum to create free community wireless networks, community murals, and teach web skills. Executed with RASA first year and Art Peace second year: http://RochesterDigitalRipple.com

EDUCATION

Rochester Institute of Technology, Rochester, NY — *Bachelor of Science in Information Technology*

Winter 2005

Concentration in Web Development, Interactive Multimedia Development, and System Administration. Minor in Applied Communication.

PERSONAL PROJECTS

Firefly Beacon — *Android application*

Summer 2016

Created an application in Unity to mimic and attract various species of firefly (male and female) for field observation. Created a custom JSON format for storing firefly blink patterns.

Nature Photography — *Flickr library*

2006 - current

Photography from various bogs and parks:
https://www.flickr.com/photos/dreamexplorer/albums

Tessellated Truncated Tetrahedron of Life — *Waterjet cut aluminum light sculpture*

Summer 2014

A sculpture designed to project a seamless light pattern. Photos of the sculpture in various settings: https://flic.kr/s/aHsjGQR8nq. Slideshow of the sculpture build process: https://bit.ly/2V9WpAm

Space Skateboard — *Accelerometer-based reactive lighting*

Summer 2013

Skateboard with LED lighting that responds to acceleration forces using an Arduino microcontroller.

Slideshow of the space skateboard build process:
https://bit.ly/2NsYxRm