

Dennis O'Brien  
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## Work Experience

### Lead Software Engineer Electronic Arts – Playfish Studio San Francisco, CA

March 2010 to present

- Lead a team of software engineers to create innovative, scalable, and secure social games on the Facebook Platform. (AS3, Java, Facebook API)
- Hired, trained, and mentored a team of software engineers in order to grow the studio from inception to having multiple game teams in development.
- Created a flexible asset pipeline that artists and content managers used to add and modify game content without programmer involvement. (Google Docs, Python, XML)
- Created tools to detect problems with assets and data files at build time. (FlexUnit, Python, JSFL, ant)
- Created diagnostic tools to detect problems with the live games and gather information useful for debugging. (bash, Python, Google Analytics)
- Documented best practices and ensured that all teams were following them.
- Worked across the organization to share technical knowledge and research findings.

### Senior Software Engineer LeapFrog Emeryville, CA

July 2003 to March 2010

- Developed numerous games for the Leapster, Leapster2, Leapster Explorer, Didj, ClickStart, and web platforms. (C++, C, ActionScript, AS2, AS3)
- Designed and developed software libraries for third party game developers creating games for LeapFrog handheld video game platforms. (C++, AS2)
- Lead a team of developers to create a high performance 2D graphics engine on top of OpenGL ES. (C++, OpenGL ES 1.1)
- Ported the Adobe Flash Lite 3 player to an ARM Linux embedded platform. (C++, SCons)
- Developed ActionScript extensions in C++ to provide additional functionality including JSON serialization/deserialization.
- Created numerous tools to improve the art production pipeline and aid in game design. (Python, wxPython, SCons, Buildbot, JSFL)
- Researched, ported and documented tools to help game developers better understand and optimize performance issues and memory usage. (oprofile, mpatrol, valgrind, LTTng)
- Provided technical support to third party game developers on several LeapFrog game platforms.

**Lead Programmer****Purple Monkey Studios**

Chicago, IL

March 2002 to July 2003

- Designed and implemented large-scale, data-driven web applications.
- Developed rapid prototypes of applications and games.
- Identified production bottlenecks, then designed and developed tools to streamline production.
- Defined functional specifications for client proposals and technical specifications for internal development.
- Collaborated with artists and clients to make compelling web experiences.

**Freelance Developer**

Chicago, IL

August 2001 to March 2002

- Worked with game designers at VtechKids to develop game prototypes for custom handheld devices. Created custom websites including dynamic content and secure online transactions. (Flash 5, ActionScript, PHP, Python, GPG)

**Lead Programmer****Jellyvision Interactive**

Chicago, IL

March 2000 to August 2001

- Developed multi-player and single-player games and online experiences. (Flash 4, Flash 5, Java, JavaScript, XML, Python)
- Designed and developed back-end systems to support multi-player games and persistent user experiences. (Java, Perl, Python, XML, JavaScript)
- Designed and developed tools to streamline production. (C++, Flash SDK, Python, Perl)
- Worked closely with artists and designers to expand the possibilities and reduce work.

**Research Assistant, Instructor****Instructional Technology Lab**

University of Illinois at Chicago

May 1998 to February 2000

- Provided technical consultation to University faculty and staff on design and implementation of multimedia content for use in the curriculum.
- Created online guides, tutorials, seminar materials, and help pages related to instructional technology.
- Researched new software applications for web and multimedia development.

**Graduate Assistant****SCAILAB Computer Center**

University of Illinois at Chicago

August 1997 to December 1998

- Maintained a network of Windows workstations, Macs, and Novell servers in a student computer lab.
- Administered UNIX webservers and file servers.
- Researched new software for lab security, administration and pedagogy.

### **Research Assistant**

#### **Laboratory for Atmospheric Chemistry**

University of Chicago Department of Geophysics

September 1993 to September 1994

- Developed programs to interface laboratory experiments with network computers.
- Assisted Professor Jon Abbatt in many aspects of research including designing experiments, building equipment and analyzing results.

### **Research Assistant**

#### **Laboratory for Atmospheric Probing**

University of Chicago Department of Geophysics

May 1993 to September 1993

- Developed computer simulations to model rain drop distributions and mixing.

### **Research Assistant**

#### **Laboratory for Astrophysics and Space Research**

University of Chicago Department of Astrophysics

May 1992 to September 1992

- Developed programs to analyze sequences of digital images of the Sun.

### **Science Intern**

#### **National Science Foundation**

Washington, D.C.

June 1990 to September 1990

- Selected and edited scientific research articles for release to the press.

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## **Computer Skills**

- Python – This is by far my favorite language for getting things done.
  - C++ – Advanced understanding and experience.
  - C – Advanced understanding and experience.
  - ActionScript 2 – Many years of professional experience.
  - ActionScript 3 – Some experience for personal projects.
  - JavaScript – Expertise with the core language, some experience with the DOM.
  - Java – Some professional experience.
  - OpenGL|ES
  - Debugging with gdb, gdbserver, and Eclipse CDT
  - Dynamic memory leak analysis with Valgrind and mpatrol.
  - Static analysis with Splint and Flexelint.
  - Thorough understanding of Linux linkers and loaders.
  - Android SDK – Personal projects.
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## **Education**

### **University of California Berkeley**

Course in Artificial Intelligence (CS188).

### **University of Illinois at Chicago**

Graduate studies in Computer Science.

Academic interests: Computer Graphics, Visualization, and Animation.

### **University of Chicago**

B.A. in Physics

Academic interests: Physics, Astrophysics, Geophysics

### **Christian Brothers High School**

Memphis, TN

Graduated with honors.

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## **References**

References can be made available upon request.