

## Joseph E. Sutton

phone : +1 661 748 3226

webfolio : <http://jstty.com>

gmail : [joseph.e.sutton@gmail.com](mailto:joseph.e.sutton@gmail.com)

github : <http://github.com/jstty>

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### Projects & Experience

#### Principal Platform Engineer - GlassLab

10/2013 - Present

Redwood City, Ca

- Game Services Platform
  - Using: NodeJS, RESTful APIs, JSON, Redis, Couchbase, MySQL, Express, PassportJS, Mocha, AWS
  - Lead architect and lead engineer
  - Scalable service based architect
- <http://Playfully.org>, <http://ArgubotAcademy.org>
  - Using: AngularJS, LessJS, HTML5, CSS3, Bootstrap, JQuery, Grunt, Mocha, Bower, Karma
  - Lead architect and lead engineer

#### Sr. Software Engineer - Intertrust Technologies Corporation

6/2013 - 10/2013

Sunnyvale, Ca

- Kabuto
  - Using: Javascript, HTML5, CSS3, LessJS, NodeJS, WebSockets, BackboneJS, jQuery, Handlebars
  - Created WebSockets server for realtime communication and push notifications
  - Add/maintained various front-end features

#### Game Service Engineer - Electronic Arts

8/2011 - 6/2013

Redwood City, Ca

- Streaming Games
  - Using: Video Streaming, NodeJS, HTML5, iOS, PhantomJS, MySQL5, Riak, AWS
  - Lead Architect, Technical Director, and Server Engineer.
  - Defined & Documented API's, network architect and created code samples for developers to use the backend services.
  - Developed all backend services and deployment system.
  - Developed monitoring, command & control system with frontend.
- R&D HTML5 Game (Strike Fortress)
  - Used: NodeJS, HTML5, JSON, Javascript
  - Client and server side framework for multi-browser using WebSockets.
  - Command and control system to monitor, manage and configure servers in realtime.
  - Documented development process and Network system.
- Monitoring Tool
  - Used: Oracle, Drupal, LDAP, PHP, Javascript, JSON
  - Lead developer, Server setup, pack and deploy scripts. Developed API, backend PHP scripts, client side Javascript and some HTML/CSS.

#### ISI - Intelligent Agents for Large Scale Security Simulation

3/2010 - 7/2011

Marina del Rey, Ca

- Assisted with development of the National Cyber Range, part of DARPA's contribution to the Comprehensive National Cyber Initiative.
- Developed agent to virtual communication API, command and control system, maintained documentation and integrated source code from another collaborating group.

**Post Grad Research - Digital Video Watermarking and Attacks**

9/2007 - 9/2009

Bakersfield, Ca

- Used: C++, GSL, libPNG, FFTW, Eclipse, Xcode on Linux and OS X
- Batch processes PNG images, converts discrete pixel values to continuous coefficient values (DCT using FFT)
- Converts continuous coefficient values to discrete pixel values (CDT using FFT), writes PNG image
- Adds watermarks to a series of images using various methods
  - Gaussian, Uniform, or Orthogonal normal
- Attacks watermarks in a series of images using various methods
  - Bootstrap
  - Time-Series Intra-Video Collusion
- Calculates the similarity values of the watermark and attacked images.
- Creates difference images of attacked and watermarked from original, for visualization.

**Lecturer**, California State University of Bakersfield

9/2007 - 6/2009

Department of Computer Science, Bakersfield, Ca

**DIVR**

6/2005 - 10/2005

Bakersfield, Ca

- Developed simultaneous multiple digital video playback software
  - Used: C++, FFMPEG, libJPEG, MS VS 2003, and wxWidgets for Windows platform
  - Supported a dozen video formats, OpenGL/DirectX hardware acceleration, and various image formats.
  - Created user instruction manual, installer application and CD
- Improved/Created server-side software
  - Used: PHP4, C/C++, FFMPEG, POSIX, and CVS for Linux
  - Updated and maintained code base. Created live encoding/decoding video daemon. Created MPEG4 to AVI converter
- Tested/debugged server-side and client-side software

**CiSMS**

9/1999 - 7/2004

Fresno, Ca

- Co-Owner - President and Lead Software Engineer
- Created a user friendly e-learning/presentation development and customized presentation viewing software
- Tested/debugged all server-side, and client-side software developed
- Specialized in Modular based designs

**Computer Experience**


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**Languages:** Javascript, HTML(4/5), LESS, CSS, JSON, PHP, XML, C/C++, Python, Bash,  $\text{\LaTeX}$

**WebDev:** RESTful, APIs, jQuery, Underscore, NodeJS, AngularJS, Grunt, Bower

**Protocol/Lib:** HTTP, XMPP, XML-RPC, MPEG, AVI, JPEG, PNG, DCT, FFT

**OS:** Linux, Mac OS X, Windows

**Tools:** Git, Xcode, WebStorm, Nginx, HaProxy, Photoshop

**Database:** Couchbase, Redis, MongoDB, MySQL, Oracle, Cassandra, Riak

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**Education**

M.S. in Computer Science  
University of Southern California, Los Angeles, Ca  
GPA: 3.6/4.0, Honors: Cum Laude

9/2009 - 5/2011

B.S. in Computer Science  
California State University Bakersfield, Bakersfield, Ca  
GPA: 3.8/4.0, Honors: Magna Cum Laude  
Award: Computer Science - Outstanding Graduating Senior of 2007

9/2004 - 9/2007