

# • Kristi Tsukida •

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## Skills

Programming, problem-solving, engineering, machine learning, critical thinking, communication

*Languages:* Matlab, Bash/Linux scripting, Python, HTML, CSS, Javascript, C/C++, Git/SVN/CVS

*Technologies:* object oriented programming, automated scripting, data mining, microcontroller firmware and circuits, PCB layout, parallel GPU programming, wireless communication, audio and video processing, Linux servers, Django, Photoshop, Illustrator

*Projects:* [taikonome.com](http://taikonome.com) (an online taiko metronome), [mrglmrgl.com](http://mrglmrgl.com) (a code snippet Django app) [inochitaiko.com](http://inochitaiko.com) (Inochi Taiko website)

## Experience

**Machine Learning Researcher** at *Information Design Lab, Univ. of Washington*, Jan 2010 - Jan 2012

- Analyzed scoring and ranking based on paired comparison data using maximum likelihood and convex optimization (Matlab)
- Chip-seq tag location algorithm for inferring precise protein binding locations in DNA (Python)
- Data preprocessing and cleaning, cross-validation, statistical data modeling
- Sysadmin for internal Linux computer cluster

**Electrical Engineer and Software Developer** at *Intellisys Corp.*, Sept 2007 - Aug 2009

- Rewrote the core neural simulation processing algorithm (C/Nvidia CUDA GPU) to boost processing speed over 2x
- Integrated voice commands using CMU Sphinx (C), webcam capture and processing using OpenCV (C++), video preprocessing, and proximity sensor collision prevention for control of autonomous embodied robot over wireless network
- Patent US20110119057: Neural segmentation of an input signal and applications thereof

**Electrical Engineer and Software Developer** at *the California Institute for Telecommunication and Information Technology (Calit2)*, Sept 2006 - Sept 2007

- Enabled modular sensor input, motor control, and wireless control for a robotic platform by designing custom AVR microcontroller circuit board (Eagle PCB), firmware (C), and API
- Developed remote control protocol and interfaces for cell phone (Bluetooth) and computer (802.11 wireless)
- Worked on motor control system and interface for a high resolution multi-spectral art scanner

**Programmer** at *San Diego Supercomputer Center (SDSC)*, Sept 2004 - June 2006

- Wrote scripts to automate management of a distributed network of servers
- Setup and maintained SVN server
- Led student team and documented procedures

## Education

**M.S. Electrical Engineering**, Dec 2011  
*University of Washington, Seattle*  
GPA 3.8

**B.S. Electrical Engineering**, June 2007  
*University of California, San Diego*  
Regents Scholar, Provost's Honors  
Major GPA 3.8, Overall GPA 3.6

## Miscellaneous

- Performed Taiko drumming for 2009 World Baseball Classic (Naruwan Taiko) and 2011 Taiko Jam concert at the National Taiko Conference (Inochi Taiko)
- Aspiring rock climber (V3 bouldering), boomerang thrower (and occasional boomerang catcher)