

Sagar Pandya

Contact

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Languages

Python
C/C++
Bash
Java
JavaScript
Matlab
SQL

Tools

*nix Administration
Git/SVN
Vim

Work Experience

Sandia National Laboratories • R&D Software Engineering

Jan 2013-Present

Solved challenges related to the development of satellite ground systems.

- Developed a parallel unit-testing tool on top of the Jenkins Continuous Integration tool. Total nightly unit test time decreased from 12 hours to 4 hours.
- Implemented an extensible PyGTK GUI for controlling the parameters of a satellite simulation tool to enable quicker and more thorough testing of the ground system.
- Successfully led an effort to replace legacy code annotation tools with equivalents using the Clang compiler's libtooling interface.
- Made modifications to Blender 3D to integrate different sensor algorithms into its node editor interface for faster prototyping.

Jet Propulsion Laboratory • Affiliate Intern

June-Nov 2012

- Performed optimizations of an automated target recognition system in Matlab.
- Implemented optimizations in MEX.
- Ported a novel target detection algorithm from raw C to MEX to test its effectiveness in the overall target recognition pipeline.

Intel Corporation • Graduate Technical Intern

Summer 2011

- Researched methods for the implementation of a tool that facilitates the rapid development of device firmware
- Prototyped the tool using Python and the wxWidgets graphical toolkit

Education

University of Southern California
Master of Science, Computer Science

May 2012

University of California, Santa Barbara
Bachelor of Science, Computer Engineering

June 2009

Academic Experience

Graduate Research • iLab • University of Southern California

2012

Developed robotics control software for an in-house modular robotics framework using C++, Objective-C, and Python. Optimized a computer vision algorithm for the lab, gaining a 200% speed increase using SSE2 and SSE3 compiler intrinsics.

Senior Capstone Project • UC Santa Barbara

2009

Developed an automatic door lock that sensed a user's presence via their Bluetooth device. Designed electronic parts, schematics, and circuit boards; programmed a PIC to interface over RS232 and MAC layer protocols; developed a web application for configuration; implemented a server backend to manage the device on a network. Development in C, PHP, and SQL.

Personal Projects

Nimbus Kickstarter funded FUSE filesystem that allows Mac OSX users to mount their CloudApp account as a virtual disk.

Automover Command-line utility that sorts media based on contextual hints in the filename.

Trollicons Rage icons for the most popular IM clients. A Ruby script makes deployment and generation of packages quick and easy. Over 20,000 downloads.