**Ken Dang**

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**Education:**

**UCSD, Computer Engineering Major, Warren College** (Sep 2009 – June 2013)

**Work Projects:**

**Python Installer Builder** (August 2013 – Jan 2014)

**Coverity, Software Engineer**

I developed and designed Coverity’s new installation builder which was originally written in ant. I had to redesigns ants build automation task and mechanisms into python with the help of doit (a third party library). I faced difficulties with gathering binaries for installer throughout internal build systems, and preparing binaries to be build for install4j. I also designed a property system which allowed customizable builds, and a more modular type of build system. The designed allowed ant property files to be directly imported into python, which would parse and store each value. I also had to work with build machines and deploy the installer builder into Jenkins integration service

**Coverity Jenkins Plugin** (March 2014 – June 2014 +)

**Coverity, Software Engineer**

I am the sole engineer who maintains and develops features for Coverity’s java open source plugin. I handled added new integrations with our analysis products to allow users integrate testing into their builds. I also designed the configuration screens for the addition of test analysis. In addition to development, I also handled a series of bug fixes and tweaks of the plugin, which involved improving compatibility with older Coverity products, improve version checking and handing outstanding errors throughout the plugin. All production with Jenkins dealt with understanding and utilizing jenkin’s plugin architecture and api. On top of that, I also worked with jelly to create interfaces and submit user data into the java backend.

**In-place Upgrade Automation** (March 2014 – June 2014)

**Coverity, Software Engineer**

Before starting the project, the installer for Coverity’s “Coverity Connect” was originally upgraded through manual steps. I developed their inplace upgrade through install4j, and with the use of java to create an autonomous process that upgraded the user’s postgresql database and their product. The work done within install4j dealt with creating gui to request and validate essential information for upgrades. Also created custom java actions, which utilized Install4j’s api and postgresql binaries to create database backups, restore database, console stdout streaming, configuration file modification and handling all file system requirements.

**Side by Side Upgrade Automation** (August 2014 – October 2014)

**Coverity, Software Engineer**

In addition to developing the in-place upgrade feature for the Coverity Connect installer, I also designed and developed their side-by-side upgrade. Within the side by side, I worked with install4j and java, but also worked closely with property and xml files. I created algorithms to parse and analyze property files so that the installer is able to preserve user settings. I also made java custom actions to create Coverity backups, which contained database backup, and essential properties files.

**Technical Skills:**

* Programing Languages: Java, Python, C/C++, ANT, MIPS, Verilog, VHDL, Matlab, HTML, OpenGL, GIT
* Scripting Languages: Bash, Regex, PHP,
* Operating Systems: Mac, Windows 7/Vista/XP, Linux/Unix
* Development Environments/IDE’s: Eclipse, Dreamweaver, MatLab, Xilinx, Install4j.

**Coursework:**

* **Computer Science** 
  + Components and Design Techniques for Digital Systems
  + Principles of Computer Operating Systems
  + Computer Architecture and Design
  + Advanced Digital Design Projects

**Extracurricular Activities**

* **UCSD Competitive Tennis Team (**Aug 2010 – Present)
* **Outback Climbing Center Volunteer** (Aug 2012 – Present)
* **Special Interest Group for Embedded Systems (SIGBED)** (Jan 2010 – Jan 2011)