Vipul Nataraj

10599 Nathanson Ave.

Cupertino, CA 95014

T: 408-420-6299

Email: vnataraj@purdue.edu

OR

vnataraj@outlook.com

Github URL: http://www.github.com/vnataraj

PROFILE SUMMARY

A senior in Computer Science looking for Internship or Full Time opportunities.

WORK EXPERIENCE

Undergraduate Research Assistant (**May/13-Oct/13**):
- Implemented the Boids Algorithm in Standard ML as a contribution to the MLton project
- Currently working on writing a version for Multi-MLton that supports the multithreading libraries

Broadcom Corporation (**May/12-Aug/12**):

Applications Engineering Intern (XLP Product Line):
- Wrote debugging, testing, and developing tools in Python to fulfill a range of applications including redundant evaluation board power cycling and error log parsing.
- Debugged and wrote a patch preventing a XAUI MDIO-related problem.
- Assisted in benchmarking operations under various board conditions and silicon conductor types.

Altera Corporation (**July/11-Aug/11**):

Marketing Analyst Intern:
- Performed Market Segmentation and Market Analysis for Altera's corporate customers

EDUCATION

Purdue University, (B.S. Computer Science, expected December 2014)

OTHER FINISHED PROJECTS

Java:
- Wrote a functional MiniJava compiler using Java and ANTLR that assembled into MIPS
- Broken down into Lexer, Parser Generator, SSA Generator, Type Checker, Register Allocator, and Code Generator

C/C++/C#:
- Implemented an IP fragmenter in XINU that supports fragmentation with variable MTU(Maximum Transmission Unit) values.
- Implemented parts of an operating system for XINU including process message passing, a process scheduler, and a filesystem
- Wrote a working shell with Lex and YACC that implemented some basic features from C shell

Senior Design:
- Led software development and designed logic for an autonomous robotic fish
- Optimized software on controller to lower response time, allowing for the use of a lower power microcontroller without need for multithreading
- Features implemented on fish include obstacle avoidance and ability to correct instability in roll, pitch, and yaw.
- Video viewable on YouTube at the following URL : https://www.youtube.com/watch?v=bB2tXgTXwxw

JavaScript:
- Wrote AI for Pac-Man game, currently trying to improve logic controller of one of the ghosts
- Game playable at http://vnataraj.github.io/pacman/

Android:
- Developed application while using the SCRUM development process to sync notes across Android platform

MAJOR-SPECIFIC SKILLS
- Java, C, C++, C#, Git, UNIX, Python, HTML, PHP, MySQL, x86-64 Assembly, MIPS, Objective-C, ANTLR, Network Design