

Vipul Nataraj

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| OBJECTIVE | Senior in Computer Science looking for full time or internship opportunities. | |
| EDUCATION | <i>Bachelor of Science</i> , Computer Science Purdue University, West Lafayette, IN expected December 2014 | |
| COMPUTER SKILLS | <i>Languages & Software</i> : Java, C, C++, Git, Python, HTML, PHP, MySQL, x86-64 Assembly, MIPS, Objective-C, ANTLR, Node.js, JavaScript <i>Platforms</i> : Windows, Unix, MacOS, Android, iOS <i>Other Skills</i> : Network Design | |
| WORK EXPERIENCE | <i>Research Assistant</i> | September 2014 - present |
| | Computer Science Department, Purdue University | |
| | <ul style="list-style-type: none">Working under Professor Hosking on MicroVM.Attempting to find out if garbage collection can be implemented within LLVM for use in MicroVM. | |
| | <i>Research Assistant</i> | June 2014 - August 2014 |
| | Computer Science Department, Purdue University | |
| | <ul style="list-style-type: none">Created a series of different attacks and attack patterns to test security of a secure end-to-end transaction system.Improved the existing GUI to dynamically resize elements based on window size. | |
| | <i>Research Assistant</i> | May 2013 - October 2013 |
| | Computer Science Department, Purdue University | |
| | <ul style="list-style-type: none">Implemented the Boids Algorithm in Standard ML as a contribution to the MLton projectWrote a version for Multi-MLton that supports multithreading | |
| | <i>Applications Engineering Intern</i> | May 2012 - Aug 2012 |
| | Broadcom Corporation, Santa Clara, CA | |
| | <ul style="list-style-type: none">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. | |
| | <i>Javascript</i> | |
| | <ul style="list-style-type: none">Co-developed a platform for people to crowd-source authoring of books for MHacks.Built site using a combination of HTML, CSS, Javascript, Firebase, and Parse.Won prize from Firebase for best use of their API | |
| | <i>Java</i> | |
| PROJECTS | <ul style="list-style-type: none">Wrote a functional MiniJava compiler using Java and ANTLR that assembled into MIPSBroken down into Lexer, Parser Generator, SSA Generator, Type Checker, Register Allocator, and Code Generator. | |
| | <i>C, C++</i> | |
| | <ul style="list-style-type: none">Implemented an IP fragmenter in XINU that supports fragmentation despite variable MTU values.Implemented parts of an operating system (XINU) including process message passing, process scheduler and a filesystem. | |
| | <i>Senior Design</i> | |
| | <ul style="list-style-type: none">Led software development and designed logic for an autonomous robotic fishOptimized software on controller to lower response time, allowing for the use of a lower power microcontroller without a need for multithreading.Features implemented on fish include obstacle avoidance and ability to control instability in roll, pitch, and yaw. | |
| | <i>Android</i> | |
| | <ul style="list-style-type: none">Developed application while using the SCRUM development process to sync notes across Android platforms | |