

# JAYANTH KOTTAPALLI

## 4B COMPUTER SCIENCE

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### Skills Summary

- Working and applied knowledge of imperative programming, object-oriented programming and algorithm, data-structure designing with **6+** years of experience
- Proficient C/C++, PHP programmer with in-depth knowledge of the inner mechanisms
- Strong understanding of OS Kernel foundations – multi-programming, concurrency, inter-process communication along with thread synchronization, file-system and memory management
- Familiarity with software and web development processes and tools acquired through working as a **Software Tools Developer**
- Excellent software, troubleshooting, and customer service skills acquired through working as a **Software Support Specialist** and volunteering as a Technical Support assistant

### Technical Adeptness

Programming Languages:	C, C++, Java, Python, DrRacket (DrScheme),
Scripting:	Shell, Bash, PHP, JavaScript - jQuery, Nodejs, AJAX, HTML, Makefile
Databases:	MSSQL, Oracle
Operating Systems:	Windows, Unix/Linux, Mac
Source code management:	Concurrent Versions System, Perforce, GIT
Miscellaneous:	Eclipse, JUnit, vim-editor, Adobe Photoshop, Adobe Illustrator, Microsoft Office

### Work & Volunteer Experience

#### Software Tools Developer – Intern

Performance review rating- Excellent

Blackberry Ltd (formerly Research in Motion Limited®)

415 Philip St, Waterloo

Sept. 2012 – Dec. 2012

- Worked on various projects using PHP, SOAP, MKS Integrity, MSSQL, Perforce as developing tools
- Automated production tools in R&D well ahead of scheduled deadlines
- Designed front-end user interfaces for easy usage and accessibility using CSS, HTML and jQuery - Javascript
- Produced efficient and well documented code for self-service and automation scripts
- Maintained the hosting servers and provided customer support for the existing automated production tools

### **Software Support Specialist – Intern**

**Performance review rating- Excellent**

Blackberry Ltd (formerly Research in Motion Limited®)

415 Philip St, Waterloo

Jan 2012 – April 2012

- Provided Level 1 administration & technical support to various production tools in R&D
- Provided technical support to source-code management tools/software with R&D
- Helped troubleshoot software issues that users have encountered efficiently
- Provided step-by-step instructions to resolve various software and technical issues
- Worked on web development using PHP, HTML, Javascript and wrote various **tool scripts** for self-service

### **Technical Support Assistant, Volunteer**

Netplus College of Information Technology

Ellesmere and Kennedy, Toronto

July 2007 – Sept. 2007

- Provided first-level technical support on basic operational and maintenance of PC's
- Set up networking of Windows, debugged network connectivity
- Installed Operating Systems, upgraded, managed files, disks
- Used documented procedures for peripherals and tools
- Made phone calls to customers to troubleshoot problems over phone

### **Voluntary work for Winston Churchill CI Prefects/Student Activity Council**

- Helped organize school dances, parent-teacher meetings, shows & several fundraising events      Sept. 2006 - Sept. 2009

## **Education**

### **Candidate for Bachelor of Computer Science/Business Option (Honours)**

University of Waterloo, Waterloo, ON, Sept. 2009 – Present

### **Certified CompTIA A+ general technician**

2007

#### **Relevant Projects:**

**iOS Mobile app - CrowdCycle** - <https://github.com/jayanth1991/crowdcycle-ios>      - Completed

A crowd sourced mobile application that provides a service to cyclists to help map out road conditions, bike routes and other points of interest to help improve the quality and safety of their cycling experience.

- Designed the software architecture for implementation
- Implemented the backend API for the client-server calls to access the database
- Created a detailed design document highlighting the design choices and various software styles used
- Collaborated with 3 other students as part of a software design course project

**Blackberry 10 Mobile app - CrowdCycle** - <https://github.com/jayanth1991/crowdcycle-bb10> - In progress

This project is an extension of the original iOS mobile application intended for Blackberry 10 mobile operating system users. Contains the same functionality as the original application is developed as a native Blackberry 10 application to take complete advantage of the developing tools Blackberry has to offer.

- Researched extensively about the feasibility of using native Blackberry 10 MapView
- Designed the software architecture for implementation that is specific to Blackberry 10 requirements
- Designed the user interface from scratch on the basis of the original iOS application using Cascades - QML
- Implemented the business logic with accordance to the original iOS application using C++
- Integrated the native MapView and Marker Blackberry 10 modules together for complete control

#### **Relevant Assignments:**

Remote Procedure Call - 2013

Marks received: 105/100

Simplified version of Remote Procedure Call simulating multiple clients/servers and a single binder.

- Designed the RPC system based on the functionality required using TCP/IP for socket programming
- Implemented the system using OOP in C++ such as inheritance and virtual class functions
- Marshalling and unmarshalling of data between the RPC entities was managed using C pointers
- Designed an efficient database system for the binder and the server to keep track of various details
- Compiled the code for the RPC system into a static library to be used for marking purposes
- Provided detailed design document explaining the implementation and how design choices for how the classes are coupled and how the marshalling/unmarshalling of data is accomplished
- As an extra credit designed a caching system for the clients and the binder to handle requests

WLPP language (subset of C++) compiler – Foundations of sequential programs (CS 241) - 2011

- Implemented a LR-1 and a LL parser along with a lexical analyzer
- Designed an efficient WLPP to MIPS compiler in C++
- Attained 20th rank in code efficiency out of over 250 students

#### **Relevant Courses:**

Object Oriented Software Development, Distributed Systems, Computer Networks, Operating Systems, Algorithms, Data Structures and Data Management, Concurrency and Parallel Programming, Software Testing & Quality Assurance, Foundations of Sequential Programs

#### **Awards, Achievements & Interests**

- Queen Elizabeth II Aiming for the Top scholarship, University of Waterloo September 2009
- Ontario Scholar's Award, November 2009
- Grade 12 Computer Engineering Award
- Winston Churchill C.I. Medallion grade 11 as well as received an Honour Roll in grade 9, 10, and 12
- Runner-up in 2009 TDSB Cricket regional championship, Toronto City Championships Winston Churchill C.I., Scarborough, ON, June 2009