

# Huzefa Fatakdwala

3B Computer Engineering  
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## PROGRAMMING

C • C++ • Java • Python  
C# • Lua • Tacc • VHDL  
Obj-C • ARM Assembly

## TECHNOLOGIES

Cocoa SDK • OpenGL • Android  
svn • perforce • win32 • linux  
rtos • posix • gdb • gcc • git

## EDUCATION

**UNIVERSITY OF WATERLOO**  
**B.A.Sc IN COMPUTER ENGINEERING**  
In Progress | Waterloo, ON

## ASSIGNMENTS

### KIRSCH EDGE DETECTOR

Wrote VHDL code to generate hardware on an FPGA that detected all edges in an image.

### CIRCULAR QUEUE

An extremely robust implementation of a circular queue written in C for a lab and used by multiple lab groups as part of their project.

### NAVIGATOR APP

Used accelerometer, compass and gyroscope to count footsteps and navigate between two points on a known map.

## COURSEWORK

Introduction to Compilers  
Computer Networks  
Digital Systems Engineering  
Operating Systems  
Algorithms and Data Structures  
Database Systems  
Digital Computers and Systems

## LINKS

All projects mentioned can be found on my public github profile.  
Github:// [chromozonex](#)  
LinkedIn:// [huzefa](#)

## EXPERIENCE

### ARISTA NETWORKS | SOFTWARE ENGINEER INTERN

May 2015 - Aug 2015 | Santa Clara, CA

- Designed a feature that allows a user to attach and apply a PBR policy on an interface that is not part of the default VRF.
- Implemented VRF leaking through use of PBR which allows setting a nexthop address outside of the current VRF.
- Added unit tests to make sure we were able to resolve routes in non default VRFs.

### APPZERO SOFTWARE | SOFTWARE DEVELOPER INTERN

Sep 2014 - Dec 2014 | Ottawa, ON

- Designed feature to separate out DCOM registry keys being dissolved.
- Implemented a quick fix to correctly handle reparse points during app migrations.
- Added a test to check OS intercepts when docking an application.

### CRANK SOFTWARE | SOFTWARE DEVELOPER INTERN

Jan 2014 - Apr 2014 | Ottawa, ON

- Designed a native MacOS implementation of the Storyboard runtime using OpenGL rendering technologies.
- Designed and implemented a multiplatform stand-alone launcher for applications created with the Storyboard Designer Tool.
- Created a Storyboard browser plugin that integrated both into the runtime and design environment.

### CRANK SOFTWARE | SOFTWARE DEVELOPER INTERN

May 2013 - Aug 2013 | Ottawa, ON

- Worked on porting the Storyboard Engine from FreeRTOS to SafeRTOS. Used an embedded board (NXP LPC17xx) for testing the engine.
- Implemented automated testing of Storyboard Engine on embedded targets such as Texas Instruments AM335x running Linux and QNX.

## PROJECTS

### MUSIC SYNCHRONIZER | ANDROID APP FOR HACK THE NORTH

Sep 2015 | Waterloo, ON

Analyzed a song playing using the sounds waves recorded by the mic and attempted to play the same song on current device in sync with the one playing.

### UW MICRO AERIAL VEHICLES TEAM | SOFTWARE LEAD

May 2013 - Dec 2014 | Waterloo, ON

Analyzed images on an odroid-xu running Ubuntu using the OpenCV framework. Also installed and calibrated SONAR to implement altitude-hold.

### WIZDO | WEB APP FOR KIK HACKATHON

Jan 2015 | Waterloo, ON

Application that lets a user ask and answer a question to the people in roughly the same geographic location as where they are located.

### WHACK-A-MOLE! | ANDROID GAME

Jan 2014 - Apr 2014 | Ottawa, ON

This is similar to the arcade game "Whac-a-mole". Developed a high score manager that primarily stored the user data in JSON format in persistent memory.