

# Siddharth Vaknalli

1B Software Engineering | University of Waterloo

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## ► Summary Of Qualifications

- Strong programming experience in Java through projects and AP courses and deep understanding of OOP principles
- Self-taught knowledge of HTML and CSS through personal website
- Understanding of C and C++ programming through university courses
- Excellent critical thinking skills and detail-oriented approach. Strong time management skills and commitment towards meeting deadlines.
- Fast learner with eagerness to explore new concepts and skills
- Proficient in professional oral and written communication demonstrated through club executive positions, Model UN and DECA
- Excellent teamwork and inter-personal skills developed through a multitude of extracurricular activities

## ► Skills

**PROGRAMMING LANGUAGES:** Proficient In: Java, C

Familiar with: C++, HTML, CSS, Javascript

**IDES/TEXT EDITORS:** Eclipse, Energia, Sublime Text

**TOOLS:** MS Office (Word, Excel, PowerPoint), Photoshop, Illustrator, Premiere

## ► Projects

### AI Chess game (Java - Eclipse) | Dec 2014 - Jan 2015

- Developed a Java-based Chess game with a rich graphical interface. Features single and two-player options and a help section.
- Used OOP principles to model game pieces and their behaviour (movement, attacks, special moves etc.) and to keep track of game statistics.
- Utilized Swing and AWT toolkits for designing game graphics.
- Included 4 levels of AI difficulty by utilizing the mini-max algorithm and alpha-beta pruning techniques.

### Squeak Home! (Java - Eclipse) | Dec 2013 - Jan 2014

- Programmed a creative cat-and-mouse 2D maze game with 3 game-play modes.
- Utilized OOP principles to model different game components (health, traps, inventory) and used file input to simulate maze. Designed graphics using Swing and AWT toolkits.
- Extensively utilized data structures and timers to simultaneously control Energy bar and moving Alligators in the maze.
- Implemented automated screen scrolling. Designed collision testing of Mouse with Alligators to check for end of game

### Personal website (HTML, CSS - Sublime Text) | Dec 2015 - Present

<http://siddharthvaknalli.github.io>

- Utilized HTML and CSS to build personal website from scratch

### Priorify! (Java - Eclipse, Android Studio) | Nov 2015

- Collaborated with 2 other people to create an Android app that inputs a list of tasks and prioritizes them according to criteria set by the user
- Developed a back-end algorithm in Java for prioritizing tasks by accounting for their due dates, importances, difficulties and time frames as set by the user. Utilized OOP principles and comparison and sorting techniques to implement the algorithm.
- Ranked in Top 10 at EngHack 2015

### Space Invaders Game (C Embedded - Energia) | Oct 2015 - Nov 2015

- Collaborated with 4 colleagues to build a shooter game using Tiva C Series Launchpad and Orbit Booster Microcontroller for university project.
- Utilized structs and data structures in C to keep track of a gun, bullets and moving blocks. Implemented functions to keep track of game score and to display high score at end of game.
- Implemented collision detection of bullets with blocks and used inbuilt accelerometer and potentiometer to control block speed and gun position.
- Achieved a group grade of 98%.

## ► Additional Experience

### Process Assistant (Co-op)

Kirtec Tooling and Mfg. Inc. · Sep 2013 to Jan 2014

- Performed workshop tasks such as drilling, tapping threads and milling.
- Showcased creativity and initiative by designing and manufacturing an aluminium meat tenderizer.
- Demonstrated strong teamwork skills and ability to learn new concepts fast

### Teaching Positions

YouLearn Education Centre/Akanksha Foundation

- **Grade 11 Math Tutor:** Increased student's understanding of concepts and facilitated rise in course grade
- **Assistant Teacher (Volunteer):** Taught English and Maths to lower-income community children in an NPO. Supported staff in one-on-one tutoring and managing classrooms.

### High School Club Executive Positions

Richmond Hill H.S. · Sep 2014 to Jun 2015

- **VP-External Affairs of MUN Club:** Managed external correspondence, treasury and publicity.
- **Founding Member of Filmmaking Club:** Collaborated with exec team to organize meetings and design lessons.

## ► Awards

University Of Waterloo ·

**President's Scholarship and Scotiabank Software Engineering Entrance Scholarship** 2015

97% entrance average and strong extracurricular achievement

University of Waterloo ·

**Honour Roll in Senior Canadian Computing Competition** 2015

High competency in programming challenges and knowledge of computing algorithms

### Top Awards at Model UN conferences

Ranked in 1st and 2nd places, demonstrating strong communication and critical thinking skills

DECA Ontario · **Event Finalist at Regional Competition** 2015

Displayed business acumen and presentation skills in Financial Team Decision Making category

## ► Activities and Interests

- Table tennis, swimming and cricket for leisure
- Public speaking competitions such as Model UN and DECA
- Played keyboard for 5 years
- Graphics designing and video editing using Photoshop, Illustrator, Premiere and Windows Movie Maker (took a high school Communications Tech. course)
- Business and securities markets (took a Grade 12 Financial Securities course)