

Kaarthic Pulogarajah 1B Mechanical Engineering

University of Waterloo | 647-870-5145 | kaarthicp@hotmail.com | kaarthicpulogarajah.github.io | linkedin.com/in/kaarthicp

Summary of Qualifications

- Experience in SolidWorks, AutoCAD, C++, HTML, CSS and Arduino obtained through academic courses and self-learning
- Excellent written and verbal communications skills obtained through writing lab reports and tutoring
- Exceptional teamwork and problem solving skills, acquired through design projects and competitions
- Strong analytic skills and consistent attention to detail, as shown through experimental lab courses
- Quick learner with ability to adapt and integrate into surroundings

Experience

MATH AND SCIENCE TUTOR | EDUCARE TUTORING | OCTOBER 2015 – JUNE 2016

- Reinforced and improved middle school and high school students' understanding of core concepts in various subjects
- Developed strategies and schedules with each student to focus on long-term and short-term goals
- Communicated effectively with parents and maintained professional yet friendly relationships

Relevant Projects

1315-MH WIND TUNNEL | SEPTEMBER 2015 – JANUARY 2016

- Designed frame of wind tunnel to hold force and wind speed sensors
- Co-authored a comprehensive proposal describing functionality, costs, and design of how to build wind tunnel
- Integrated differential pressure sensor with Arduino to measure wind speed inside tunnel
- Produced a mathematical model to relate sensor readings to true wind speed using experimental data
- Created long-term schedule to ensure tasks were being done to meet project deadline

FORMULA MOTORSPORTS | SEPTEMBER 2016 - PRESENT

- Designed chain guard on SolidWorks to be machined and used to protect chain on 2017 FSAE competition car
- Adhered to competition rules and regulations regarding design of chain guard

FREEZING AND COOLING TECHNOLOGIES | OCTOBER – NOVEMBER 2016

- Innovated refrigerator capable of maintaining temperature without access to the grid
- Increased efficiency using principles of chemistry, structures, and materials science
- Created a prototype of design to test and show proof-of-concept
- Produced a professional report describing experiment and observed conclusions

PERSONAL WEBSITE | SEPTEMBER 2016 - PRESENT

- Built website using HTML and CSS to showcase personal projects
- Displayed highlights of 3D modelling projects, including a water pump and a rocking horse
- Exhibited proficiency in C++ through projects such as Battleship and Mastermind games

Education

UNIVERSITY OF WATERLOO | EXPECTED GRADUATION 2021

- Candidate for Bachelor of Applied Science, Honours Co-op
- Relevant Courses; Engineering Graphics and Design

Achievements and Awards

- 3rd place in University of Toronto High School Design Competition | 2014
- Black belt in Taekwondo | 2014
- Top 25% Math Contests: Small C (2016), Hypatia (2015), Fermat (2015), CIMC (2014), Cayley (2014)
- 9th place DECA provincial competition | 2015

Interests and Activities

- Programming | 2013 – Present
- The Reckoner (newspaper) | 2012-2016
- Taekwondo | 2008-2016
- DECA (business competition) | 2013-2015
- Piano | 2010-2016