Shammamah Hossain

shammamah.hossain@mail.mcgill.ca
linkedin.com/in/shammamahhossain
shammamah.github.io

Education

McGill University (09/2013 -)
BSc. joint major physics and computer science
Transcript available upon request.

Winston Churchill High School (09/2009 - 05/2013)
Alberta High School Diploma
International Baccalaureate Diploma

Practical experience

Research assistant 05/2017 - present

McGill University

Conducting research in the field of physics under the supervision of Dr. Brigitte Vachon, assisting in the Phase-II upgrade of the ATLAS detector at CERN. Responsibilities include implementing an optimal filtering algorithm on a field-programmable gate array, as well as some data analysis using the ROOT framework.

Communications subsystem specialist 01/2017 - present

McGill Space Systems Group (CSDC team)

Responsibilities include researching and implementing communications protocols, telemetry, and coordinating with the ground station for a 3U CubeSat.

Practical experience (continued)

Project manager, financial officer

09/2016 - 04/2017

McGill Robotics (RoboHacks)

Responsibilities included coordinating and organizing the event, allocating tasks and resources, and ensuring proper communication among team members. Also responsible for keeping track of expenses incurred throughout the year, preparing projected and final budgets for the academic year, and handling reimbursements.

Director of technology

02/2016 - 03/2016

McGill Robotics (RoboHacks)

Responsibilities included coordinating and organizing the event, as well as providing consultation related to hardware and electrical components.

Electrical specialist

11/2015 - 12/2016

McGill Robotics (Mars Rover)

Responsibilities included contributing to printed circuit board design with the use of specialized software (DipTrace), as well as searching for suitable integrated circuits. Also responsible for soldering, testing, and running diagnostics on the circuit boards.

Research assistant

06/2014 - 08/2014

University of Lethbridge

Conducted research in the field of biochemistry under the supervision of Dr. Steve Mosimann; approximately 35 hours/week. Responsibilities included recording data, protein purification, and running polyacrylamide gels.

Practical experience (continued)

University of Lethbridge high school team member

03/2012 - 05/2013

International Genetically Engineered Machines

Assisted in brainstorming project ideas; researching prospective ideas; doing lab work (culturing cells, performing genetic mutations, and running agarose gels); interacting with the community; and working on the project wiki. Co-authored a scientific poster with results of the project.

Research assistant

06/2012 - 08/2012

University of Lethbridge

Conducted research in the field of biochemistry under the supervision of Dr. H.J. Wieden; approximately 35 hours/week. Responsibilities included protein purification and creating and presenting a scientific poster.

Languages

Computer languages and software (Gitlab: shammamah)

- Python/MATLAB
- Mathematica
- Java
- C
- C++
- ROOT
- VHDL
- MIPS assembly
- Bash
- LaTeX
- HTML/CSS
- JavaScript
- Arduino IDE
- Processing
- DipTrace
- LTSpice
- MS Office (Word, PowerPoint, Excel)

Spoken languages English, French, Bengali

Lab skills

- FPGA programming
- Printed circuit board design
- Oscilloscope operation
- Cell culturing
- Protein purification
- Gel electrophoresis

Publications

Graphite Publications, 15/09/2016	The Autonomy Olympics: RoboSub 2016
Graphite Publications, 14/07/2016	Redefining Experiences: the Implications of Augmented Reality
Graphite Publications, 18/03/2016	Hacking Away at Tech's Borders
Engadget Public Access, 09/09/2015	Show me how to use the face book!