MATTHEW WRIGHT

2B Systems Design Engineering
✉ mjgwrigh@uwaterloo.ca
289-208-3683

SKILLS

Software: Python, Java, C/C++, SQL HTML/CSS, JavaScript (Node.js, React), MongoDB, Linux/Bash/Git, AWS

Hardware: Control Systems, PLCs, RSLogix500/5000, Studio 5000, Arduino, Multisim, Oscilloscope, Multimeter

Design: AutoCAD, SolidWorks, UI/UX, User-Centered Design, Iterative Design, Rapid Prototyping, User Personas

EDUCATION

University of Waterloo, 2016-present
Candidate for Bachelor of Applied Science in Systems Design Engineering
Courses:

- Data Structures and Algorithms
- Human Factors in Design
- Digital Systems

Cumulative Average: 81%

AWARDS

Arthur F. Church Award
$10,000 scholarship for outstanding contribution to the community

President's Scholarship of Distinction
$5,000 scholarship awarded to students with a +95% high school average.

Marpeck Leadership Award
$810 scholarship for engineers with an aptitude for leadership

INTERESTS

NBA, Ping Pong, Weightlifting, Pool, AI/Machine Learning, Dance

EXPERIENCE

Controls Software Engineer, Dematic Limited, Mississauga, ON
Jan 2017 – April 2017; Sept 2017 – Dec 2017

- Designed, programmed, and commissioned state of the art materials handling systems
- Created PLC programs using RSLogix 500 and Studio 5000
- Utilized Visual Basic and SQL queries to automate data entry
- Communicated effectively in an interdisciplinary team both in speech and writing

Lifeguard and Swim Instructor, City of Burlington, Burlington, ON
Aug 2016 - June 2017

- Developed leadership and communication skills teaching swimming lessons to people of all ages
- Demonstrated confidence in emergency medical situation when providing first aid

Cabin Leader/Lifeguard/Sailing Instructor, Camp Mini-Yo-We, Port Sydney, ON

Web Master, Forest View Church, Oakville, ON

PROJECTS

Voting Machine, Java

- Utilized graphical user interfaces to replicate an electronic voting machine
- Implemented data protection using PBE with MD5 and DES encryption

Laser Tripwire Security System, Arduino C

- Applied the finite state machine programming pattern to build a laser triggered security system powered by an Arduino Uno
- Employed hardware interrupts to optimize the speed of the alarm response

Wikipedia WebCrawler, Python

- Implemented the BeautifulSoup library and a breadth first search algorithm to find the fastest path using links between two Wikipedia pages

Knitting Pattern Creator, Processing

- Designed an object-oriented program that allows users to create knitting patterns digitally

Sudoku Checker, C++

- Wrote and algorithm that reads a completed Sudoku from a file and verifies that the solution is correct