MATTHEW WRIGHT

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

SKILLS

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

Hardware: Control Systems, PLCs, VFDs
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
Relevant Courses:

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

Cumulative GPA: 81/100

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, Sailing, Dance

EXPERIENCE

Data Engineer, EllisDon **May 2018 – Aug 2018**

- Developed pipeline for migrating data from third party APIs into cloud-based data lake and data warehouse using Python, AWS, and MySQL
- Deployed ETL processes using AWS EC2, Lambda, S3, and RDS
- Designed RESTful API for new microservice based architecture
- Built machine learning model to predict employee turnover
- Collaborated with interdisciplinary team in an Agile development environment

Controls Software Engineer, Dematic Limited **Sept 2017 – Dec 2017**

- Led controls software team for two $100,000+ projects, completing all projects on schedule and on budget
- Developed PLC programs using RSLogix 500 and Studio 5000
- Managed an interdisciplinary team of millwrights and electricians while on-site

Electrical Controls Designer, Dematic Limited **Jan 2017 - April 2017**

- Designed state of the art materials handling systems for Fortune 500 clients
- Drafted wiring schematics using AutoCAD Electrical
- Spearheaded winning electric estimation for $1,000,000+ project

Lifeguard and Swim Instructor, City of Burlington **2015 – 2016**

Cabin Leader/Sailing Instructor, Camp Mini-Yo-We **2014 - 2017**

Web Master, Forest View Church **2017 – 2018**

PROJECTS

Linear Regression Expectation, Python, SKLearn

- Developed a machine learning algorithm to predict baseball teams' winning percentage
- Performed 6% more accurately than traditional Pythagorean expectation

The To Do List, JavaScript

- Built 'To Do list' application using MERN (MongoDB, Express.js, React/Redux, Node.js) stack

Voting Machine, Java

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

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

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

Knitting Pattern Creator, Processing

- Object-oriented program that provides a tool for creating knitting patterns

…see more at github.com/mattjgw