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, Sailing, Dance

EXPERIENCE

IT Programmer, EllisDon, Mississauga, ON **May 2017 – Aug 2017**

- Worked as part of the Insight and Analytics team to identify data points and map out process flow for several key corporate reports
- Developed ETL processes to move data from third party APIs into cloud-based data lake and data warehouse using Python, AWS, and MySQL
- Deployed ETL process using AWS EC2, Lambda, S3, and RDS
- Designed RESTful API for new microservice using Swagger
- Collaborated with interdisciplinary team in an Agile development environment

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 used by Fortune 500 clients
- Drafted electrical wiring schematics using AutoCAD electrical
- Developed PLC programs using RSLogix 500 and Studio 5000
- Managed an interdisciplinary team of millwrights and electricians while on-site
- Led controls team for two $100,000+ projects, completing both projects on schedule and on budget

Lifeguard and Swim Instructor, City of Burlington, Burlington, ON

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

Web Master, Forest View Church, Oakville, ON

PROJECTS

Linear Regression Expectation, Python

- Developed a machine learning algorithm to predict baseball teams' winning percentage based off runs scored and runs allowed
- Performed 6% more accurately than the famous Pythagorean expectation

The To Do List, JavaScript

- Built To Do list application from the ground up using MERN (MongoDB, Express, React, Node) stack

Voting Machine, Java

- Utilized graphical user interfaces to replicate an electronic voting machine
- Implemented data protection using 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

- 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