

# MATTHEW WRIGHT

2B Systems Design Engineering

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## 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 electric estimation for \$1,000,000+ project, won the contract

**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](https://github.com/mattjgw)