

# Alan Ma

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## Technical Skills

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### Web Development

- Designed websites and web applications using HTML, CSS, JavaScript, jQuery, Bootstrap, and AngularJS
- Created a server using Raspbian and Nginx to host websites and allow SSH remote access

### Machine Learning

- Implemented machine learning algorithms in MATLAB, including linear and logistic regression, gradient descent, and neural networks

### Data Processing

- Wrote Python scripts to parse and manipulate data to achieve desired results
- Tabulated data in Excel spreadsheets, presenting results in Word/Docs and PowerPoint/Slides

## Work Experience

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### Product Development Internship 2016

at Prolexion (start-up grammar software company)

- Conducted a competitive analysis covering technical functionality and user experience
- Created a web application to input, store, and analyze test cases using HTML, CSS, JavaScript, and jQuery
- Wrote a report summarizing the strengths and weaknesses of competitors, as well as suggestions for our own product

### Machine Learning Co-op Student 2016

at The Foundation for Student Science and Technology

- Researched machine learning at a university level
- Worked together with a graduate student from The University of Waterloo
- Wrote a paper titled "Applications of Machine Learning in Education," which has passed through PhD peer review and is awaiting publication in the Journal of Student Science and Technology

## Activities and Awards

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- 2017 Google Codejam Qualifier; placed in the top 28% worldwide across all age groups
- 2017 Placed 1<sup>st</sup> at DECA Regionals and 4<sup>th</sup> at the provincial level; qualified for internationals in Anaheim, California
- 2016 SHAD Fellow, Alumni of SHAD 2016 at Memorial University of Newfoundland
- 2016 Achieved a perfect score in Waterloo's Junior Canadian Computing Competition
- 2015 Top 1% in the Canadian Intermediate Mathematics Contest
- 2014 Top 1% in the Pascal mathematics contest
- 2014 Ontario Principals' Council Leadership Award
- 2013 First Place in Professional Engineers of Ontario's annual Mathletics Challenge

## Extracurricular Activities

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### Executive of Computer Science Club 2015–Present

- Taught lessons to a club of over 30 members, covering programming and problem solving skills

### VP of Treasury at Debate Club 2014–Present

- Managed club activities, such as organizing rounds and managing funds exceeding \$1000
- Competed at many debate competitions with teams from across the country
- Taught lessons to over 70 members
- Used spreadsheets to record tournament results

### VP of Administration at DECA 2014–Present

- Developed and managed an online student hub website and database
- Managed and tutored members in the Business Management and Administration cluster

### Editor-in-Chief of The Woodstock 2014–Present

- Oversaw the design process of the school newspaper, distributed to over 800 students
- Directed workflow and delegated tasks
- Managed the Facebook page with over 1000 likes