


Adham Zaki

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EDUCATION

BASc Industrial Engineering / University of Toronto

Dean's Honour List (2016 - Present), Minor in Artificial Intelligence Engineering,

Certificate in Engineering Leadership

SKILLS

Programming: Python, JavaScript / Node.js, Java, MATLAB

Tools/Libraries: KNIME, Pandas, Sklearn, P5.js, [Google Marketing Platform](#)

Languages: English, German, Arabic, French

EXPERIENCE

Software Engineer / Procter & Gamble

Oct/18 - May/19

- Built an end-to-end development pipeline in Java that automatically detected software changes and published to server, reducing **deployment time by 98%**
- Developed new plugins in Java for an open-source analytics software ([KNIME](#)) that leveraged Google and Facebook APIs, saving on average **150 hours per week** (30 users) and reducing **human error rate by 20%**

Web & Search Analyst / Procter & Gamble

May/18 - Oct/18

- Analyzed web traffic data in Google Analytics to assess performance of marketing strategies and suggest improvements, eliminating low-value advertising channels and increasing **advertisement interaction by 15%**
- Automated web page performance audits using JavaScript and collaborated with brand teams to implement recommendations, increasing overall **website traffic by 20%** and improving **Google Search rankings by ~2**

Full Stack Developer / University of Toronto

Sep/17 - Dec/17

- Developed 'SmartyPants' web application, a movie recommender system using JavaScript, Java, HTML, and CSS that suggests a curated list of films based on a user's generated profile using specific metrics and a predictive algorithm
- Created a proprietary algorithm to suggest films with a **95% confidence interval**
- Conducted end-user testing and implemented results to improve application

PROJECTS

The Federalist Papers / [MATLAB](#) 

- Developed a support vector machine (SVM) in MATLAB that classified authorship of the [disputed federalist papers](#) using a non-probabilistic linear classifier
- Implemented two separate algorithms to solve the classification problem with < 0.2% error
- Consolidated and visualized results including algorithm comparison, significant features, and hyperparameter optimization

eSports Betting / [Python](#) 

- Developed a machine learning model in Python to predict the outcome of professional Counter-Strike games with 62% accuracy on unseen games
- Created an open-source [betting assistant](#) that combines the model prediction with current commercial betting odds to suggest the recommended bet

SudokuSolver / [Python](#) 

- Built a Sudoku puzzle solving software in Python and published online using Google Cloud Functions as a backend
- Represented puzzles as binary programming optimization problems and solved with the help of [PuLP](#)

LEADERSHIP / VOLUNTEERING

HiSkule Mentorship 

Student-led initiative with the goal to encourage high school students to pursue STEM related careers by providing personal guidance and support

Saturday Program

Non-profit tutoring and mentorship program that helps high school students from different faculties at the University of Toronto

Go North Youth 2019

Hands-on activities, demonstrations and workshops designed to ignite curiosity about STEM; created in partnership with Google Canada and Actua

Hack the North 2018

Attended Canada's biggest hackathon as a sponsor representing Procter & Gamble with the goal of engaging students and assisting with recruitment