TJ Ayoub

Applied Mathematics at Western University

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SKILLS

- **Maple** through the implementation of algorithms and debugging processes at Maplesoft

- **MATLAB** by mathematical modeling of infectious disease

- **Python, Java, and C++** used as the main language in a host of university computer science, machine learning and scientific computing courses

- **TensorFLow, Keras & Brian** through personal exploration of machine learning practices and coursework projects

- **HTML and CSS** by developing a personal website

EXPERIENCE

Western University Department of Applied Math
Computer Algebra Intern

SUPERVISED BY DR. DAVID JEFFREY

MAY 2020 - OCT 2020

- Developed a **pattern matching algorithm** to be applied to novel **Lambert W** function simplification within **Maple**
- Potential source code implementation was mocked up and **pitched to senior Maplesoft developers** for feedback and guideline adherence. The new code will be released in the Maple 2021 update
- Progress was presented on a weekly basis to the group over at the Ontario Research Centre for Computer Algebra
- Set to publish a paper with Dr. Jeffrey describing the **novel simplifications** used in the algorithm

London Regional Cancer Program
Research Assistant

SUPERVISED BY DR. PHILIP BLANCHETTE

AUG 2019 - FEB 2020

- Investigated **prognosis** of "critical" stage lung cancer patients, before, during, and after the 2019 etoposide shortage
- Flagged then compiled relevant patient data records to be used for **statistical analysis**
- Worked closely with team members to efficiently meet deadlines

EDUCATION

Western University
BSc in Applied Mathematics

SEPT 2017 - PRESENT

- Honours Specialization (Thesis)
- cGPA: 3.96/4

AWARDS

- Scholarship of Excellence
- Undergraduate Summer Research Internship Award (USRI)

EXTRACURRICULARS

Science Students' Council
Director of Videography

APRIL 2019 - PRESENT

- Create and promote engaging content directed towards the student body
- Participate in a dedicated brainstorming/ideation team

LANGUAGES

- **English**
  Native ●●●●●

- **Arabic**
  Conversational ●●●○○