

Education

- August 2022 **McGill University** **Montréal, Canada**
– present Bachelor of Science - Honours Mathematics & Minor Computer Science.
GPA: 3.79/4.00
- September 2015 **Lycée Lyautey** **Casablanca, Morocco**
– June 2022 French Baccalaureate with High Honors (Mention Très Bien).
Specialities: Mathematics & Computer Science
Options: Expert Mathematics & Music

Research Experience

- May 2025 **Research Project on Special Values of L-functions**
– present Supervisor: Professor Henri Darmon (McGill University)
 - Currently working on the history of L-functions (reading the original books and papers), and their special values.
 - Presented my work in the USRA Number Theory seminar.
 - Started writing an expository paper on the detailed history of L-functions and the mathematicians that contributed to that subject (L. Euler, P.L. Dirichlet, B. Riemann, R. Dedekind, E. Hecke, ...): [pdf (unfinished)]
 - Funded by the NSERC (Natural Sciences and Engineering Research Council of Canada).
- Summer 2024 **Research Project on the Ergodic Theorems**
Supervisor: Professor Anush Tserunyan (McGill University)
 - Studied Measured Group Theory with applications to the Ergodic Theorems.
 - Wrote an expository paper on the ergodic theorems with a focus on Pr. Tserunyan's new proof of the Birkhoff Ergodic Theorem: [pdf]
 - This project was part of the Honours Research Project class MATH 470.
- January 2024 **Directed Reading Program on p -adic Numbers**
– April 2024 Supervisor: Doctoral student Hazem Hassan (McGill University)
 - Studied p -adic numbers and p -adic Zeta-Functions by reading the book *p -adic Numbers, p -adic Analysis, and Zeta-Functions* by Neal Koblitz.
 - Presented my learnings in front the other Directed Reading Program students.
 - Wrote a report presenting p -adic numbers, their construction and p -adic interpolation.

Professional Experience

- September 2025 **Teaching Assistant for the course History & Philosophy of Mathematics**
– present *McGill University, Montréal, QC*
Instructor: Professor Henri Darmon, Course Code: MATH 338, 135 students
 - Conducted tutorial sessions (three hours a week) and exam review sessions to go over the course content, additional content, and answer students' questions.
 - Wrote a suitable set of notes based on the students' questions to complete the ressources available to the students.
 - Planned one-on-one meetings with students who wanted to.
- January 2024 **Grader for the course Discrete Structures**
– April 2024 *McGill University, Montréal, QC*
Instructor: Mr. Jeremy Macdonald, Course Code: MATH 240, 365 students
 - Graded assignments (one every two weeks) for the course Discrete Structures.

- May 2023 – **Tutor in Mathematics**
September 2024 *McGill University, Montréal, QC*
○ Planning tutoring sessions (private or in group) for 1st year students in Mathematics.
- June 2024 **Busboy**
– present *Cirque Eloize, Montréal, QC*
○ Supported bartenders during large events by restocking beverages, supplies, and cleaning.
- May 2024 **Busboy**
– August 2024 *Pizzeria Moretti Griffintown, Montréal, QC*
○ Supported servers by cleaning tables, resetting place settings, refilling water and supplies, and maintaining clean dining environment.

Projects

- January 2025 **Expository Paper on the Divergence of the Harmonic Series**
○ Wrote a self-contained paper presenting the importance of rigor in mathematics through the detailed study of the divergence of the Harmonic Series: [pdf]
- December 2024 **Published Historical Article on Fourier Analysis**
○ Researched on the origins and impacts of Fourier analysis on modern mathematics through the original works of the great mathematicians: J. Fourier, P.L. Dirichlet, B. Riemann, G. Cantor.
○ Co-authored (along with Nisrine Sqalli) a historical paper presenting our findings: [pdf]
○ Published a condensed version in the Delta Epsilon journal: [pdf]
- December 2024 **Personal Website**
– present ○ Coded a personal website by learning and using HTML and CSS: [samylahlou.com]
○ Post regularly my personal solutions to textbook exercises, articles that I write and reviews of textbooks and books related to mathematics.

Awards

- Summer 2025 **NSERC Undergraduate Student Research Award – \$8950**

Coding Skills

Programing Languages

- Python
- Java
- C
- Bash
- Assembly
- SQL
- MATLAB
- SageMath

Markup Languages

- \LaTeX
- HTML
- CSS

Languages

English (Fluent)

French (Native)

Arabic (Native)