# Maël Charpentier

Undergraduate student in computer science and mathematics at Université de Montréal.
19 years old, French citizen, Canadian permanent residency.

## Education

### University

2021– **Université de Montréal**, *Montréal, QC, Canada*.
BSc Mathematics and computer science
- Courses passed:
  - IFT 1015 *Programming 1* (Prof Marc Feeley)
  - IFT 1065 *Discrete Structures* (Prof Margarida Da Silva Carvalho)
  - IFT 1575 *Operations Research Models* (Prof Jean-Yves Potvin)
  - MAT 1400 *Calculus 1* (Prof Robert Gwyn Owens)
  - MAT 1600 *Linear Algebra* (Prof Véronique Hussin)
  - STT 1700 *Introduction to statistics* (Prof Christian Léger)
  - MAT 1410 *Calculus 2* (Prof Lara Simone Suarez Lopez)
  - IFT 1215 *Introduction to computer systems* (Prof Max Mignotte)
  - IFT 1025 *Programming 2* (Prof François Major/Arnaud L'Heureux)
- Seminar on quantum optimization and quantum computing
  CRM Langlands Summer School (Prof Dimitris Koukoulopoulos & Yoshua Bengio)

### College (CEGEP)

2018–2021 **Collège Stanislas**, *Montréal, QC, Canada*.
- Terminale : Mathematics and computer science
  French Baccalauréat, mention très bien + DEC (diploma of college studies)
- 1ère : Mathematics, physics and computer science majors
- 2nde : Cryptography option & Member of the robotic club - *6622 Stan Robotix*
  DES (high school diploma)

## Prices, Grants and awards

2022 **NSERC** Undergraduate Student Research Awards (USRA), $7500 with an additional **FRQNT** grant, $1500

2022 Bourse d'excellence **DSCOR-DIRO** (Department of Computer Science and Operations Research of the Université de Montréal), $2000

2022 **Proyecto Garambulllo** Grant (Laboratorio de arte y cultura del semidesierto), $3600

2021 **OBVIA** (International Observatory on the Societal Grant Impacts of AI and Digital Technology), $5000

2021 Mathematics competition (**Concours Général**, France)

**Purple Comet** challenge - mathematics challenges in teams

**Recognition Award** (Prix reconnaissance), Collège Stanislas

2020 **Academic Achievement Award**, Collège Stanislas

2019 **TORCH** (*The Operations Research Challenge*) competition - (6th/35)

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## Projects

2022 **Blinx project, complement to Codeboot**, *supervised by Marc Feeley (UdeM)*.

**CodeBoot** aims to create a web application allowing to do programming, especially in python, from a browser and without any installation on the client side.
The **Blinx** project is the integration of micro-controllers to the web application CodeBoot. The creation of a configuration interface and an information exchange system (in particular to get the data from the sensors)

2021-2022 **Proyecto Garambulllo**, *supervised by Manuel Morales (UdeM)*.

Project **Garambullo** is a practical research space in art and culture with the mission of contributing to the preservation of the culinary heritage of the semi-desert region of Queretaro, Mexico.
This project seeks to use technology to build new ways of interacting with communities, as well as to preserve their knowledge. In the first step, we have created a chatbot on Facebook (messenger). The chatbot will have to take a comment in which the user will have given instructions and send back a recipe of traditional Mexican cuisine.

January 2022 CIMAT Hackathon (Guanajuato, Mexico), to present the Garambullo project

Languages Python, R, LaTeX, web language (php/html/css/js), databases (SQL, MySQL), Java, Bash (and C/C++ as beginner)

References Manuel Morales (manuel.morales@umontreal.ca),
Marc Feeley (marc.feeley@umontreal.ca)

## Extracurricular

Since 2019 **Scouts**, *160e François Perrault*.

Since 2021 **Indoor rock climbing**.

2022-2023 **Tutorial**, *introduction to python*.

2020-2021 **Tutorial**, *help in learning digital tools to overcome disabilities*.

2011-2020 **Fencing**, *fencing, foil and saber*.
bronze medal in saber, Montréal Game (2013)

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