

# Tomas McNamer

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## Frameworks

- Django / Flask
- Flutter
- React / Vue
- Web Assembly
- Ruby-on-Rails

## Skills

- Embedded Systems
- Docker
- REST/GraphQL
- Electron
- GCP/AWS/Azure

## Languages

- Python
- JavaScript / Typescript
- HTML / CSS
- C / C#
- Ruby

## Open-Source Project Contributions

- Django
- Django Channels Multiplexer
- WikiJS
- Django-Debug-Toolbar
- Vue Notifications

## Relevant Awards

### 2021 – Hack the Box, Top 100 Badge

Obtained the “Top 100” ranking badge in 4 months starting from scratch. Hack The Box is a digital penetration platform where users can test their skills on various boxes and challenges, with over 970,000 users.

### 2021 – Hack the North, Winner Best Entrepreneurship Hack

### 2021 – Hack the North, Winner, Best Use of Google Cloud

Winner of HackTheNorth 2021 in the “Best Entrepreneurship Hack” and “Best Use of Google Cloud” categories. We used computer vision to track individual users in a store to better understanding shopping patterns and promote social distancing. <https://devpost.com/software/hive-hq>

### 2021 – cuHacking, Winner, Health Category

Winner of the 2021 edition of the cuHacking hackathon in the “Health” category. We built an application that allows a safe pandemic reopening for storeowners and customers using Django REST Framework and Ionic. <https://www.youtube.com/watch?v=33fa34tD8hk>

### 2020 – Microsoft Canada Encode Hackathon, Winner

Winner of the 2020 Encode hackathon. Our solution consisted of using Machine Learning to detect the number of people in a store to promote social distancing. <https://github.com/CrowdEye/> Demo video: [https://drive.google.com/file/d/1en\\_JQ4Cdi0fVerx34ns\\_lcpqOvdCDjq0/](https://drive.google.com/file/d/1en_JQ4Cdi0fVerx34ns_lcpqOvdCDjq0/)

## Waterloo CEMC / Mathematica Centrum

1. CCC 2020 – 2022: Honour Roll, placing top 10% in the world
2. Lagrange 2019: Honour roll placed 1<sup>st</sup> in region
3. Gauss 2018: Honour roll placed in top 10% in the world
4. Pythagore 2017: Placed 136<sup>th</sup> in the world

## International

1. Kangourou (math contest): Consistently ranked in the top 500 internationally (out of 30,000-60,000 participants) 2016-2019 (2020 cancelled due to COVID)
2. Algoréa (logic and programming contest): Consistently ranked in the top 0.5% internationally all levels (out of 100,000 participants) 2016-2020
3. Alkindi (cryptanalysis): Top 5% of the category 2019

## Education and Relevant Courses

### TKS / Ottawa, Ontario / 2021 – Present

- Conceptualized the use of Brain-Computer Interface to treat depression
- Conceptualized the use of IoT data and Artificial Intelligence to reduce factory accidents
- Created a [recommendation](#) for the UN Environment Programme around air pollution

### Lycée Claudel / Ottawa, Ontario / 2009 – Present

Claudé d'Or Awards (rewards exceptional performance in a competition):

- Grade 9-10: Cancelled due to COVID
- Grade 8: Concours Kangourou, Concours Gauss
- Grade 7: Concours Kangourou, Concours Algoréa, Courses aux Nombres
- Grade 6: Pythagore, Concours Algoréa, Courses aux Nombres
- Grade 5: Concours Kangourou, Concours Algoréa, Course aux Nombres
- Grade 4: Concours Kangourou

### [Analysis of Algorithms](#) / Coursera, Virtual, Online / 2021

### [Automata Theory](#) / Coursera, Virtual, Online / 2021

### [Math en Jeans](#) / International / 2016 – 2020

- Presentation of a solution to a complex mathematical problem given by a university professor. The presentations were in front of international audiences and mathematical scholars.

### [Algorithms 2](#) / Carleton University, Ottawa Ontario / Fall 2019 – Spring 2020

- Advanced computer science algorithms for high school student enrichment

### [Introduction to Philosophy](#) / Coursera, Virtual, Online / Fall 2019 – Spring 2020

### [Practical Ethical Hacking](#) / Udemy, Virtual, Online / Fall 2019 – Spring 2020

### [Robotics Competition](#) / Ingenium / Spring 2019

- Robotics competition organized by the Science and Technology Museum

### [CS50W](#) / Harvard University, Online / 2018

- First year Computer Science Web Programming with Python and JavaScript at Harvard University

### [CS50](#) / Harvard University, Online / 2017

- First year Computer Science theory course at Harvard University

## Activities and Other Interesting Tidbits

- 2021: Creation of a distributed computing platforms on refurbished laptops
- 2020: Update the Hamilton Burlington Soroptimist website
- 2020: Drone basic certification
- 2020-2019: Curling
- 2019-2016: Judo assistant instructor
- 2020-2018: Ski assistant instructor, Edelweiss Ski Hill
- 2019: Emergency First Aid and CPR B
- 2018: Magic Mirror