

# Arnav Kumar



## skills

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### Languages

**Programming** - JavaScript, C#, TIBasic

**Scripting** - Python, R

**Markup** -  $\text{\LaTeX}$ , HTML, CSS

**Linguistics** - English, Hindi, Spanish

### Mathematics

**Pure** - Number Theory, Combinatorics, Algebras, Geometry, Functional Equations, Calculus

**Applied** - Statistics, Probability, Economics, Physical Sciences

### Specialities

**Innovation** - Possess excellent critical thinking and problem solving skills

**Adaptability** - Efficiently and quickly understand materials and instructions presented to me. Make best use of resources I am given.

**Relations** - Actively listen and maintain engaged throughout exchanges. Collaborate well with peers.

## education

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**2022** - Graduation from Webber Academy

**2019** - Completed a university level proofs course

**2019/18** - Attended the invitational CMS math camp

**2018** - Scored 5 in AP Statistics

## projects

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**arnavcs.github.io** - Made a personal website that displays all the web projects I have made.

**Inferior Pentagon** - Coded Inferior Pentagon, a web based game, with unity

**p5.js** - Programmed simulations for mathematical graphs using p5.js

**Pell's Equation** - Analyzed Pell's equation and found a novel solution for a modified form.

**Mathematics Formulas** - Creating a compendium of my works and interesting formulas in  $\text{\LaTeX}$ .

## extracurricular

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**Leadership** - Active member of student union. Often lecture at the school's math club.

**Arts** - Paint in free time. Practice flute and vocal music.

## accomplishments

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### Math Competitions

**2020** -

- Ranked 11<sup>th</sup> in grade 10 for AMC12, AIME qualifier
- First in AHSMC part I, 10<sup>th</sup> for part II
- Top 0.5% in Fermat
- Top 0.5% in CSMC

**2019** -

- Scored 99% on math 30
- Team Captain for one of the Canadian IMC teams hosted in Durban. Won bronze and silver.
- Ranked 2<sup>nd</sup> in the world in Caribou Contest
- Received the Robert Barrington Leigh Memorial Prize in the AHSMC
- Placed 1<sup>st</sup> in Canada for Fryer
- Ranked 7<sup>th</sup> in Canada for CIMC
- Placed top 1% in Fermat
- Won top 1.5% in Euclid
- Placed 8<sup>th</sup> in grade 10 for COMC and won silver

**2018** -

- Won merit in the IMC hosted in Burgas
- Top 1% in CIMC
- 10<sup>th</sup> in Canada in Pascal
- 23<sup>rd</sup> in Canada in Fryer
- Alberta gold medal for grade level in COMC

**2017** -

- Won gold for grade level in COMC

**2016** -

- Won gold for grade level in COMC

### Science

**2020** -

- Ranked 1<sup>st</sup> in Alberta for the Michael Smith Science Challenge

**2019** -

- Won gold and PIMS Award for Senior Level Project for an innovative solution to modified Pell's equation

**2016** -

- Won gold and PIMS Award for Junior Level Project for analysis of the Chinese Postman Problem