

# David Holcer

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## EDUCATION

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**McGill University** | **CGPA: 3.32**

Expected December 2024

*Bachelor of Science in Mathematics and Computer Science*

## EXPERIENCE

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**Mathematics & Computer Science Tutor**

Jan. 2020 – Present

*McGill University*

*Montreal, QC*

- Led 20+ students to academic success through individualized tutoring sessions.
- Courses Taught: Calculus, Linear Algebra, Introduction to Computer Science.

**Java AP Teacher**

June 2020 - Oct. 2020

*Geek Education*

*Remote*

- Effectively led a student cohort by developing 5 lesson plans, conducting 15 interactive coding demos, and overseeing 10 practical projects.

**Research Intern**

June 2017 - Sept. 2017

*Simon Fraser University*

*Vancouver, BC*

- Research Topic: *Novel Genomics Data Clustering & Compression Methods*
- Achieved a 30% reduction in file size of DNA base pair sequences by developing a Markov Chain clustering algorithm comparing strands' similarities through their compressed representations.

## PROJECTS

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**Generative Art** | *p5.js, Javascript, Processing, Python*

[Website Link](#)

- Crafted 10+ interactive generative art pieces using p5.js, color theory, and design principles.
- Taught 50+ university students generative art coding concepts by delivering 10 workshops and demoing p5.js projects.
- Analyzed a dataset of worldwide earthquakes creating a comprehensive infographic map by combining Data Science principles and Processing code.

**Coverify.ai** | *Spotify API, p5.js, React, Next.js, Tailwind CSS, Javascript*

[Devpost Link](#)

- Generated cover art reflecting a playlist's ambiance by analyzing songs and using parsed data in a liquid diffusion simulation algorithm by employing Spotify's API, Javascript, and p5.js.

**WriteMind** | *Typescript, React, IBM Watson Natural Language Understanding*

[Devpost Link](#)

- Innovated a creative writing platform to dynamically alternate music playback based on the sentiment analysis of user inputted text by leveraging the IBM Watson API.

**StoryWeaver.ai** | *co:here API, React, Next.js, p5.js, Tailwind CSS, Javascript*

[Devpost Link](#)

- Generated personalized, unique, and engaging text narratives using co:here's AI API.
- Designed a modern front-end website and a dynamic generative art piece using React.js, Next.js, p5.js, Tailwind CSS, and Javascript.

## TECHNICAL SKILLS

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**Coding Languages:** Java, Python, C/C++, JavaScript, SQL, Typescript, OCaml, HTML/CSS, OpenGL

**Frameworks:** React, Node.js, Next.js, Tailwind CSS

**Developer Tools:** Docker, AWS

**Libraries:** NumPy, Matplotlib, p5.js, pandas

## SOFT SKILLS

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Generative Art, Cooking, Photography, Piano Playing, Climbing, Biking