

# Daniel Carranza

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## Curriculum Vitae

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### Education

- 2017–Present **B. Sc. (Hons.)**, Western University, *GPA: 87*.  
Double Major: Mathematics and Computer Science.  
Expected Spring 2021.
- 2013–2017 **OSSD**, Saunders Secondary School, *GPA: 94*.  
Ontario Secondary School.

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### Research Experience

#### Paper

##### **2-adjoint equivalences in homotopy type theory.**

With J. Chang, C. Kapulkin, and R. Sandford, submitted.

<https://arxiv.org/abs/2008.12433>

[https://github.com/gebner/hott3/tree/master/src/hott/types/2\\_adj](https://github.com/gebner/hott3/tree/master/src/hott/types/2_adj)

#### Talks

- August 2020 **Formal Verification of Mathematics.**, *CUMC 2020*, Western University.

<https://youtu.be/LCW682zcEVs>

- August 2020 **Formalizing 2-Adjoint Equivalences in Homotopy Type Theory**,  
*Western Homotopy Theory Seminar*, Western University.

[https://youtu.be/BIqhGYoo\\_PU](https://youtu.be/BIqhGYoo_PU)

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### Scholarships and Awards

- Summer 2020 **NSERC Undergraduate Student Research Award**, Western University.
- 2018-2020 **Dean's Honor List**.
- September 2017 **Western Scholarship of Excellence**.

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### Extra-curricular Activities

- February 2020 **Higher Categories and Categorification**, *Research Visit*, MSRI Berkeley.
- Fall 2019 **Category Theory**, *Reading Project*, Western University.  
Studied a selection of topics from Awodey, *Category Theory*. Supervised by C. Kapulkin.
- October 2019 **Midwest Homotopy Type Theory Seminar**, University of Michigan.

## Programming Languages

### **Lean Theorem Prover.**

Proof assistant and formal verification language. 1 year of experience.

### **LaTeX.**

Popular typesetting language. 3.5 years of experience.

### **C++.**

Object-oriented general-purpose language. 4 years of experience.

### **Python.**

Interpreted general-purpose language. 2 years of experience.

### **Java.**

Object-oriented general-purpose language. 3 years of experience.