



# Lightning Sign Ups

Less than 1 minute account creation using computer vision

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## Executive Summary

### The Problem

Wealthsimple account creation time on average is 8 minutes. The length of this process causes many people to quit sign up.

### Our Recommendation

Add a optional computer vision component to Wealthsimple sign up that scans a filled out tax form.

### The Outcome

Computer vision sign ups will take less than 1 minute, significantly decreasing user quit rate for Wealthsimple sign ups.

# Wealthsimple sign up takes 8 minutes, which leads to high quit rates

We ran experiments with 14 low income parents, telling them they could get \$500 from the Canada Learning Bond in just a few minutes if they signed up to Wealthsimple

## Sign up takes 8 minutes

Only 29% of the people who participated completed Wealthsimple sign up.

The average time to complete signup for these people was 8 minutes.

## People lose trust over time

The longer sign up takes, the more likely people were to ask why the app needed specific information, such as SIN or amount they'll save each month.

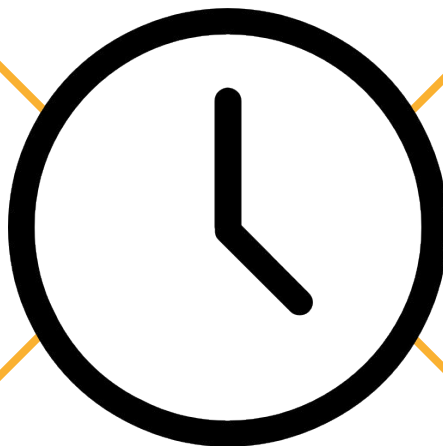
## Users quit sign up

71% of people quit part way through sign up, many said they would finish later, but never did.

When asked why, every single person cited reasons related to lack of time.

## Opportunity to streamline

If the Wealthsimple sign up process is streamlined and made very quick, user quit rate will drop significantly.



# Use computer vision to make sign up lightning fast

## Information extraction

Using computer vision and OCR, all the information from the tax form is extracted.

## Streamlined sign up

The extracted information is placed in the Wealthsimple sign up process. All the user has to do is confirm their information.

## Less than 1 minute sign up

All the sign up information required is included in a tax form. All the user has to do is confirm their information and answer questions from the existing Wealthsimple chat bot.

## Secure

Using Tensorflow.js the image can be processed locally, and never has to be sent to a server.

This process is local and secure.

Canada Revenue Agency / Agence des revenus du Canada

Protected B other countries

Income Tax and Benefit Return 2018

Step 1 - Identification and other information

Information about you

Enter your social insurance number (SIN): 123456789

Enter your date of birth: 12/31/1980

Your language of correspondence: English

Is this return for a deceased person?

If this return is for a deceased person, enter the date of death: Year Month Day

Marital status

Tick the box that applies to your marital status on December 31, 2018:

1 ☐ Married 2 ☐ Living common-law 3 ☐ Widowed 4 ☐ Divorced 5 ☐ Separated 6 ☐ Single

Information about your spouse or common-law partner (if you ticked Box 1 or 2 above)

Enter their SIN: \_\_\_\_\_

Enter their first name: \_\_\_\_\_

Enter their net income for 2018 to claim certain credits: \_\_\_\_\_

Enter the amount of universal child care benefit (UCCB) from line 117 of their return: \_\_\_\_\_

Enter the amount of UCCB repayment from line 213 of their return: \_\_\_\_\_

Tick this box if they were self-employed in 2018: ☐

Do not use this area

Information about your residence

Enter your province or territory of residence on December 31, 2018: \_\_\_\_\_

Enter the province or territory where you currently reside if it is not the same as your mailing address above: \_\_\_\_\_

If you were self-employed in 2018, enter the province or territory where your business had a permanent establishment: \_\_\_\_\_

If you became or ceased to be a resident of Canada for income tax purposes in 2018, enter the date of: Month Day or departure Month Day

entry \_\_\_\_\_ or departure \_\_\_\_\_

Elections Canada (For more information, see "Elections Canada" under Step 1, in the guide.)

A) Do you have Canadian citizenship? Yes ☐ No ☐

If Yes, go to question B. If No, skip question B.

B) As a Canadian citizen, do you authorize the Canada Revenue Agency to give your name, address, date of birth, and citizenship to Elections Canada to update the National Register of Electors? Yes ☐ No ☐

Your authorization is valid until you file your next tax return. Your information will only be used for purposes permitted under the Canada Elections Act, which include sharing the information with provincial/territorial election agencies, members of Parliament, registered political parties, and candidates at election time.

Do not use this area 172 \_\_\_\_\_ 171 \_\_\_\_\_

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# How to implement lightning sign ups with computer vision



TensorFlow.js is a machine learning framework that allows you to run computer vision on mobile, without ever sending data to a server



Use an existing OCR solution for handwriting, Tesseract OCR is a great choice.

## We'll make it for you!

We have a ton of experience in machine learning, and have already built lots of tools in this space, including a computer vision application that can detect any disease in a medical image of a lung.

We'd be thrilled to build lightning sign ups for Wealthsimple!

# Wealthsimple Community Fund

Create educational social impact funds and offer incentives to promote RESPs on Wealthsimple

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## Executive Summary

### The Problem

RESP's are widening the gap between the poor Canadians, and the rest of the country. While the lack of RESP account sign ups has mostly been attributed to lack of awareness.

### Our Recommendation

Organize a community fund, that will focus on providing funding for local events and series that promote RESP's and Wealthsimple.

### The Outcome

Through funding community events and series, raise awareness of RESP's within lower income neighborhoods and promote Wealthsimple's image.

## The Problem



According to a Report by Carlton, only 18% of families with children under age of 18 in the lowest income quintile reported having an RESP account, while 41% of comparable families in the highest income quintile reported having RESP accounts.

It is estimated that 1.5 million Canadian children could currently make a claim for a little over \$1 billion in unpaid CLB benefits.

*The* OMEGA  
Foundation

*"Instead of helping the poor, RESP's are effectively widening the gap between the poorest Canadians and the rest of the country. "*



According to a UBC Report, 32% of families don't participate in RESP because of a lack of awareness.



## The Solution



The fund would be focused on short-term events and activity series around Canada that are centred around community development, specifically around youth and education related activities.

**Events:** One day events. Examples: Festivals, Pow Wows, neighbourhood celebrations.

**Series:** A short-term series of connected activities. Examples: skill building workshop series, gardening series, community art projects.

**Activities would align with at least one of the following goals:**

- Improving the long-term well being of the community
- Promoting access to post-secondary education

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## Examples of Similar Funds



City of Toronto Event Fund



Ontario Cultural Attraction Fund

# Where to start

GIIN is the largest impact investing forum, happening this October.

GIIN works with hundreds of impact investors to help them develop impact measurement and management strategies, and to identify deal opportunities.



Open Impact has lists of many impact investment opportunities in Canada. They also help Canadians source impact investment deals.



Impact Base is a searchable, online database of impact investment funds and products designed for investors. They also help connect social impact funds with interested organizations.



# Thank You

Dear Wealthsimple team,

We'd like to personally thank you for this wonderful opportunity to contribute our part to increasing RESP sign ups to Wealthsimple. Through this experience we've learned so much!

Best Regards,  
Liam and Volodymyr

