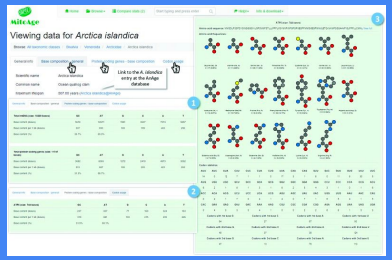
How to contribute to longevity project

on Gitcoin

Why it matters?

- There are many promising non-profit longevity projects for which it is hard to find academic funding
- For each dollar you donate at Gitcoin sponsors provide additional money called “matching”
- Gitcoin uses a concept of so-called “Quadratic funding” that dramatically increases matching for small individual donations, often **5-30** times



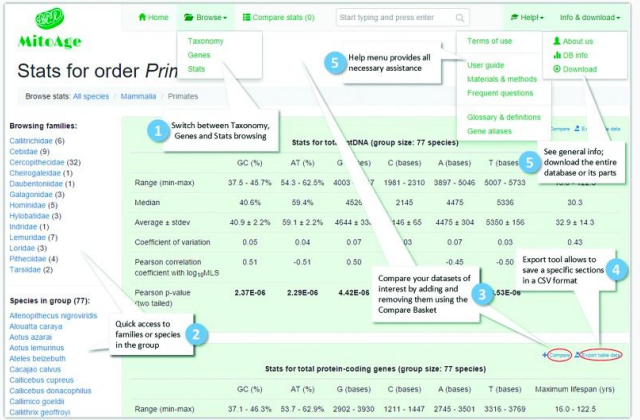
Examples of the projects ->

MitoAge

a curated, publicly available database,
containing an extensive collection of mtDNA features and longevity records

MitoAge

Mitochondria are the powerhouse of the cells and the only organelles in animal cells that have their own genome. They have also long been considered to play an important role in the mechanisms of aging, longevity [1], and age-related diseases (e.g. Parkinson's disease [2]; amyotrophic lateral sclerosis [3,4]).



Currently, MitoAge contains calculated mtDNA compositional features of the entire mitochondrial genome, mtDNA coding (tRNA, rRNA, protein-coding genes), and non-coding (D-loop, insertions) regions, codon usage for each protein-coding gene, and longevity records for over 900 species. We have also created a website (www.mitoage.info) that provides basic tools for the comparative analysis of mtDNA, particularly focusing on animal longevity.

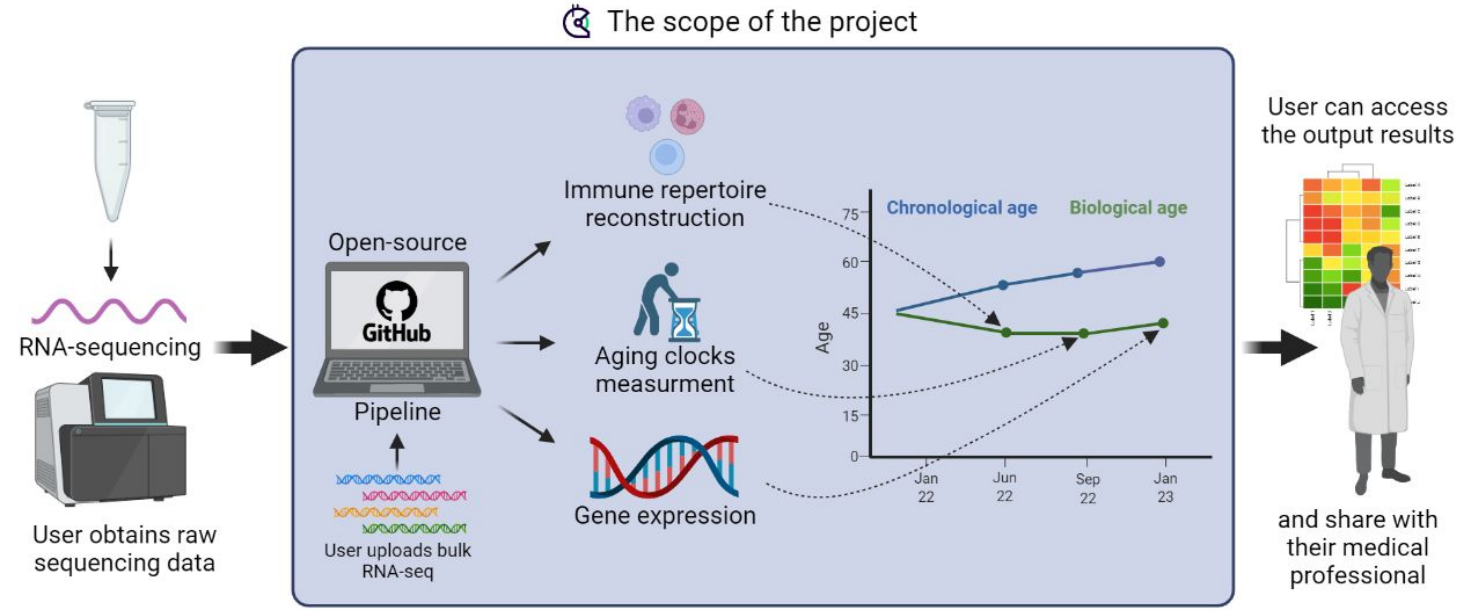
We believe that such a database needs constant development and improvements in order to stay relevant and support the aging research field. A more intuitive and easy-to-use interface will enable access to the data for users with less computational skills. The project has maximum availability to the public and possibly will attract more contributors for both development and research.

see more at https://gitcoin.co/grants/5171/mitoage-mitochondria-longevity-knowledge-base

Examples of the projects ->

MyRNAHealth

MYRNAHEALTH



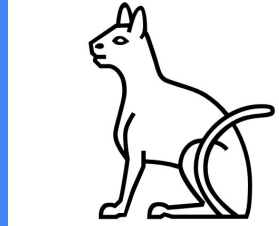
Results include gene expression quantification, detection of mutations in coding genes, transcriptomic aging clock computation for estimating the pace of aging, and reconstruction of the adaptive immune repertoire (AIRR) from immune cells to get hints on adaptive immunity.

see more at https://gitcoin.co/grants/5221/myrnahealth

Examples of the projects ->

Cat longevity diagnostics

open-source, affordable, scalable, accurate and user-friendly aging clocks for cats



cat longevity diagnostics

Cat Longevity Project aims to develop open-source, affordable, scalable, accurate and user-friendly aging clocks for cats. Unfortunately, current clocks cost anywhere between 160 and 250 dollars per sample, are somewhat cumbersome to process for people with low coding experience and are also not that accurate in assessing biological age (mortality and disease risk, if you will).

It can be improved by using low-depth RNA-sequencing on multiplexed native transcripts, and by also incorporating other functional analyses (cat muscle strength, walking meters, etc.) into a single open-source, open-data metric, with specific instructions on how regular biohackers and vets can achieve the same results.

Why is this important?

If we can develop an affordable, accurate & user-friendly estimator of feline biological age, not only can regular people and vets use it to assess the best diets & lifestyle-interventions for their cats, but it also helps startups in the vet space move quickly to develop newer, better, more complex therapies for age-related diseases. We want our cats to live longer and healthier!

see more at https://gitcoin.co/grants/5042/cat-longevity-diagnostics

How to donate -> Major steps

1. Register github account (if you do not already have one), video tutorial
2. Login at gitcoin.co with your github account
3. [optionally] improve your trust score to have higher matching for your donation
4. Install Metamask (browser extension, Android app, iOS app) or other wallet with polygon support

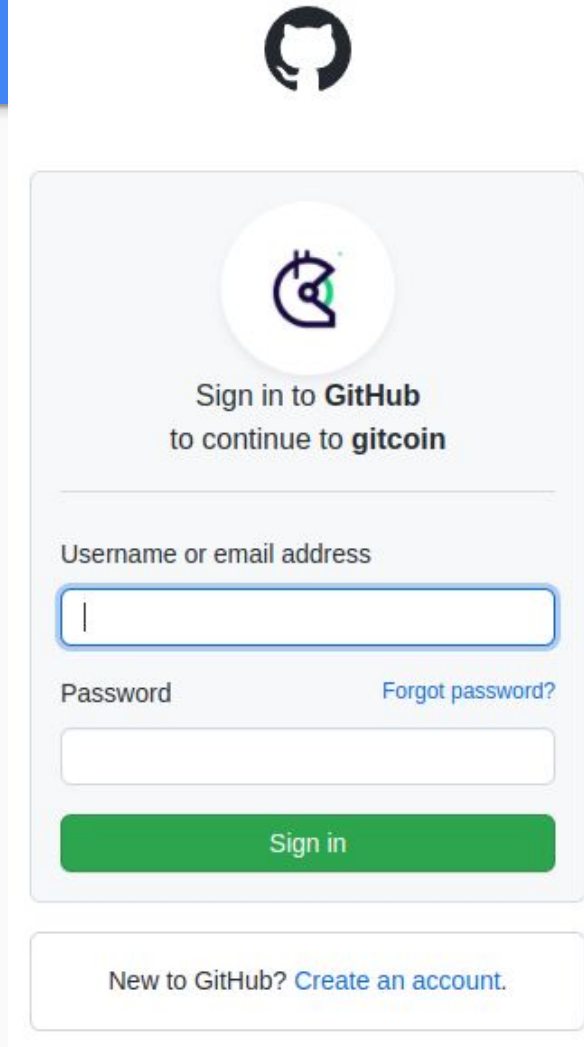
   Note: video tutorial for steps 4, 5 and 6 is https://www.youtube.com/watch?v=wK4x8Y_rSss

5. Connect Polygon Network (because default Ethereum network has huge >30 USD transaction fees, avoid it)
6. Put:
   a. FIAT (USD/EURO/etc) money **DIRECTLY** on Polygon with one of FIAT to POLYGON exchanges ,
      i. Tutorial videos about putting money on Polygon with MoonPay and Transak
   b. **OR** if you already have crypto on Ethereum network - use https://wallet.polygon.technology/bridge
7. Select the grants that you like and add to card
8. Select “Polygon checkout” and donate with Polygon (you may need to have some MATIC for transaction)

STEP 1. Create account

STEP 1 You need to use http://github.com account to login to GitCoin. If you do not have it, you should register one. It is very straightforward, there is also a video showing how to register video

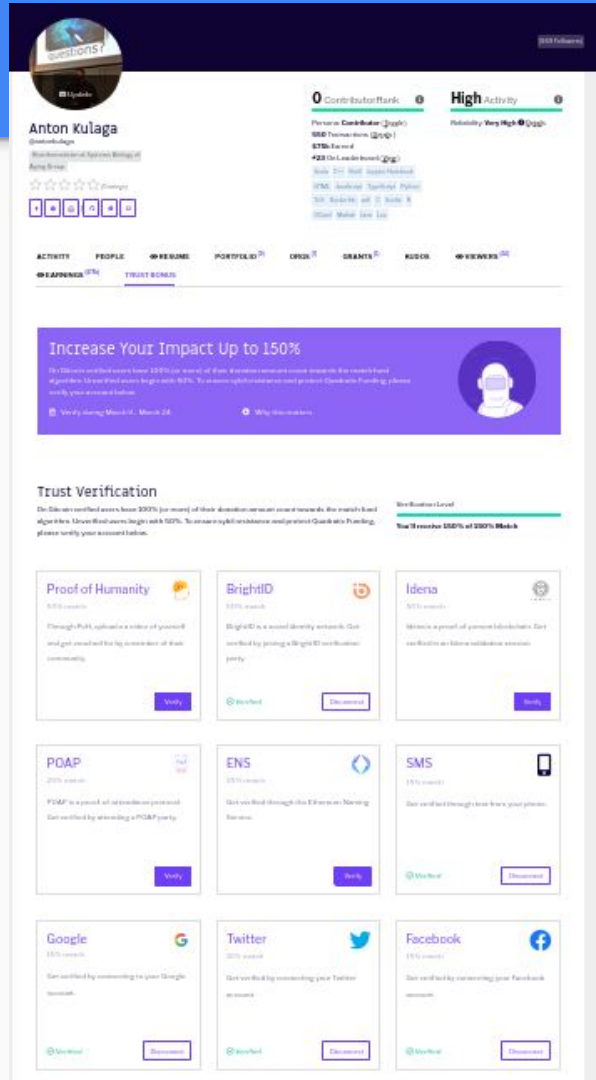
Then you have to go to http://gitcoin.co and push “sign in” It will redirect you to “Sign in on Github” window.



STEP 2 [Optional]. Improve trust score to increase matching

To increase matching on your donations up to three times, you can open Profile -> Trust Bonus (screenshot on the right) and verify your account with some of the services on the list.

Here is the video showing how to do this. SMS, gmail, twitter verifications are the easiest. BrightID is a bit harder (requires installation of the mobile app and attending a zoom call at https://meet.brightid.org) but gives larger trust bonuswcomers they make https://meet.brightid.org

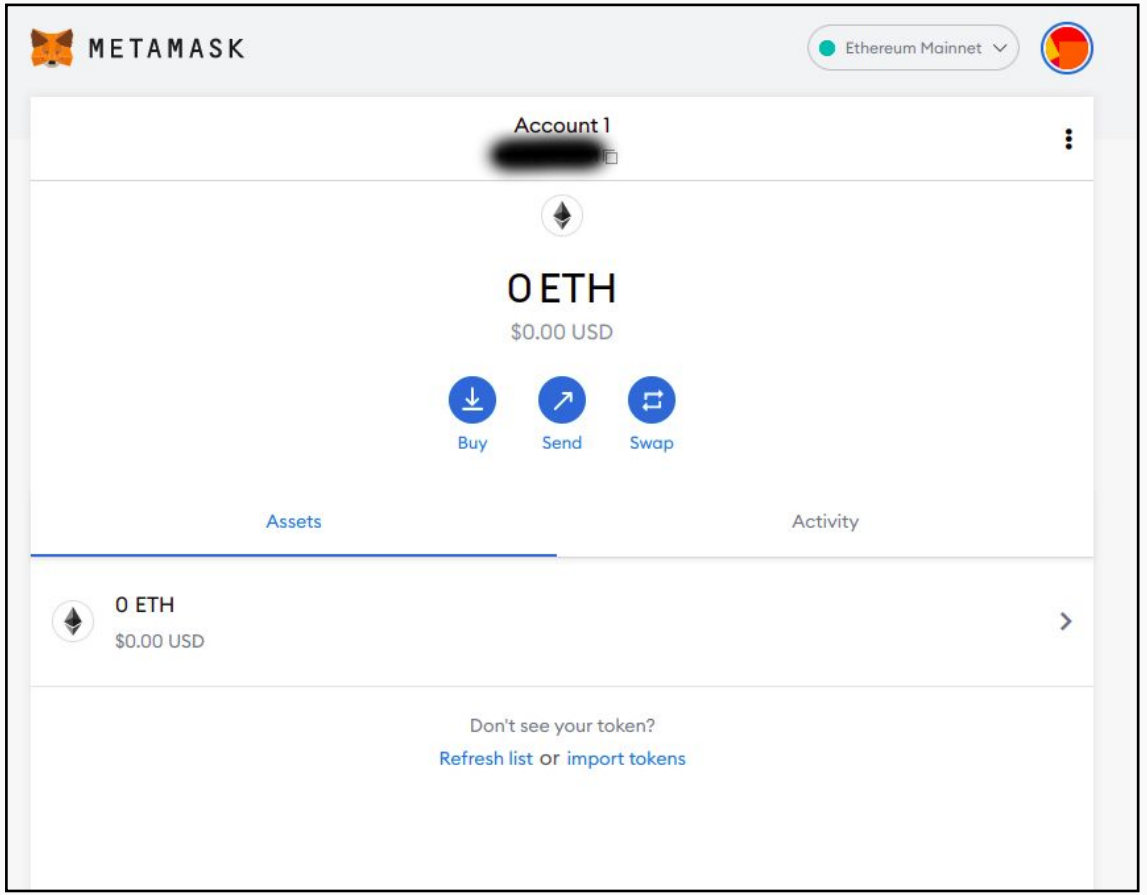


STEP 3. Install Metamask

Installing Metamask Browser extension can be the easiest way to start as Gitcoin sometimes has bugs with wallet connect. Here is a Metamask video tutorial .

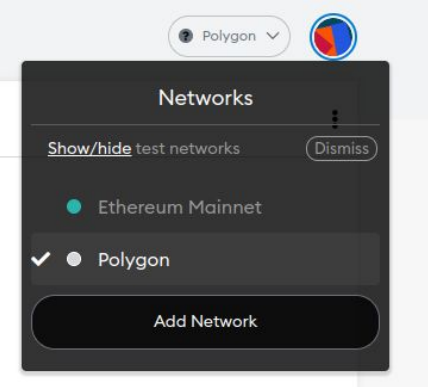
After installation you will see something like screenshot on the right

You can try other wallets, but take into consideration that most of the wallets (including Revolut app) do not have many features essential for Gitcoin donation to work.

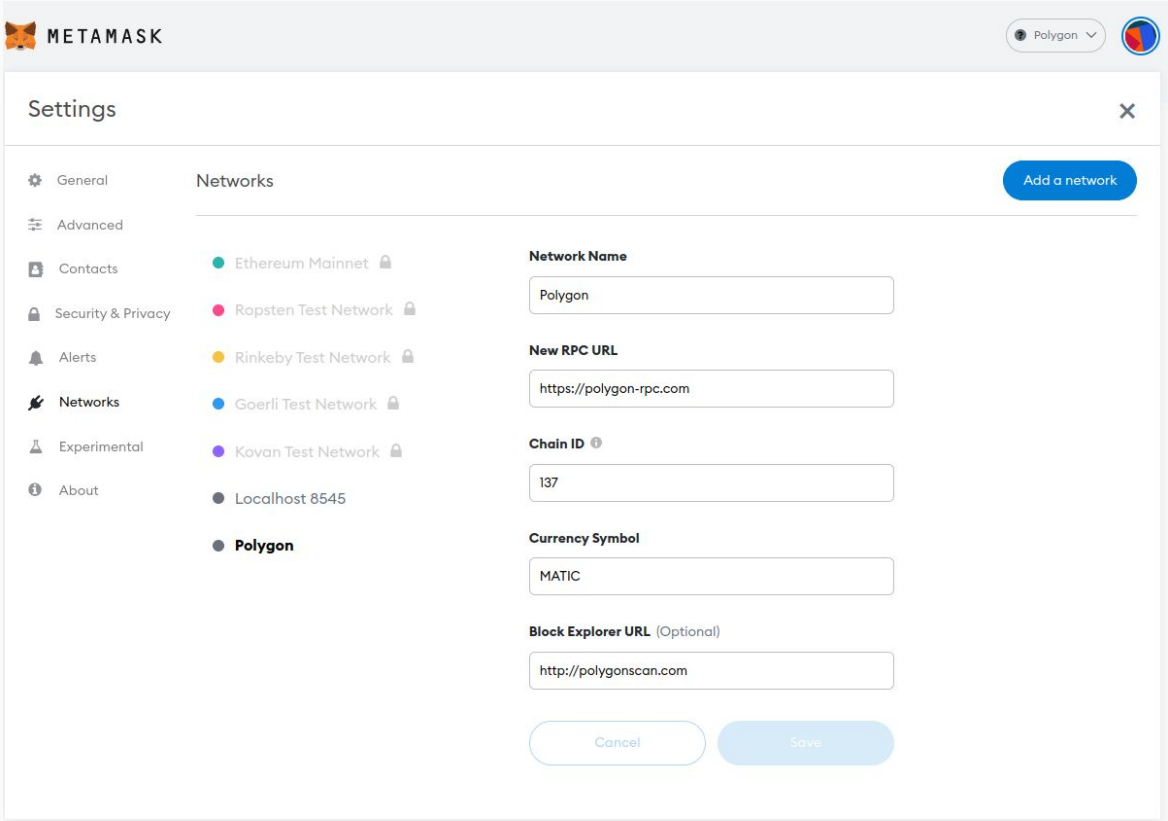


STEP 4. Add Polygon network with *Settings -> Networks -> Add Network*

We need to add Polygon network to avoid HUGE Ethereum transaction fees and select it:



Please, watch https://www.youtube.com/watch?v=GWUwFDFOipo if you want to learn what Polygon is and why you should use it instead of main Ethereum network



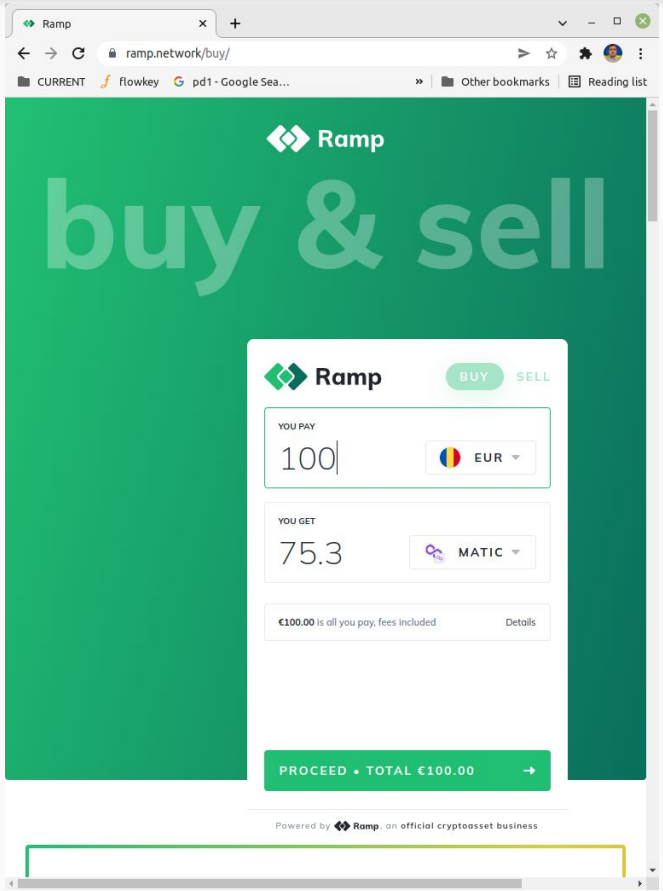
STEP 5. Put FIAT (EURO/USD/etc.) money on Polygon

You should use exchanges that convert FIAT **DIRECTLY** to Polygon, for example:

1. Ramp (example on the right)
2. Transak
3. MoonPay (video example)
4. Sendwyre
5. CarbonMoney

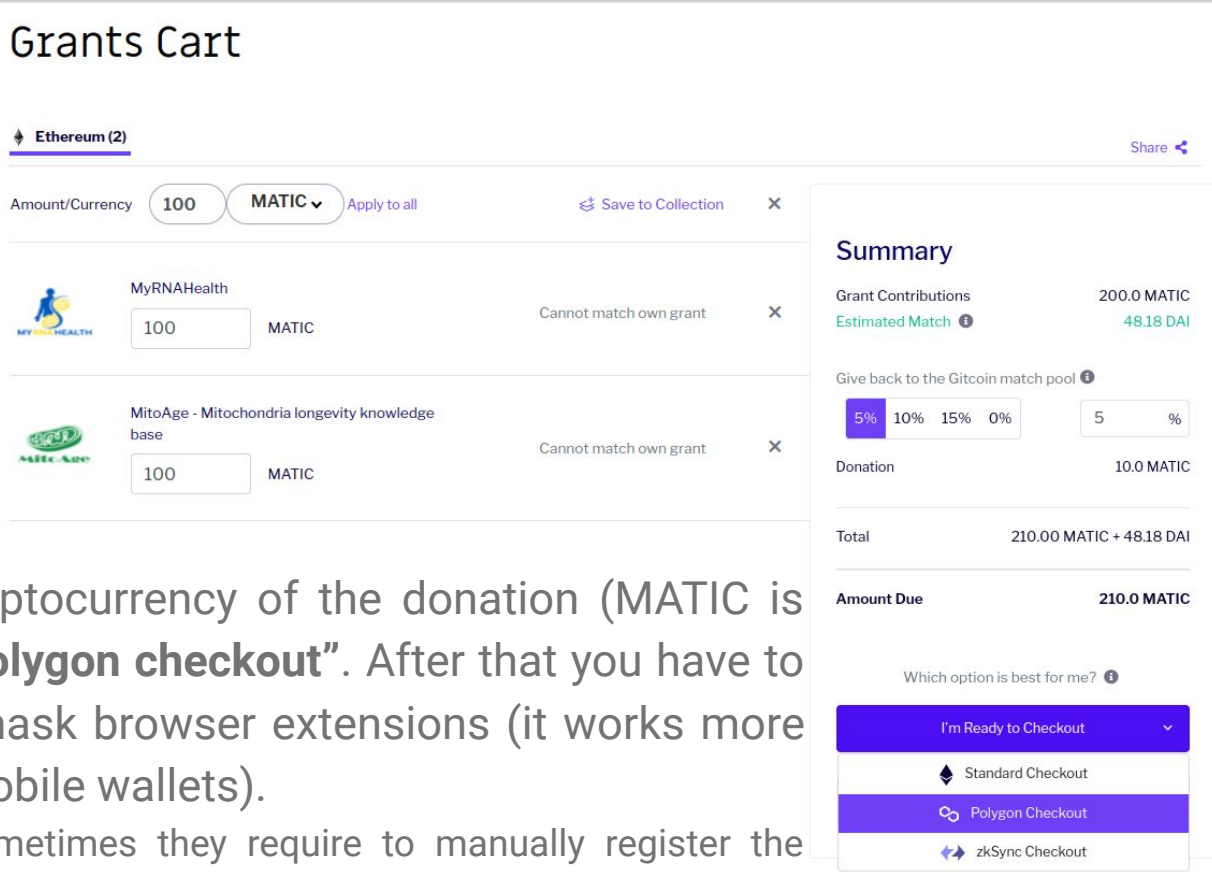
When you select the crypto token, please check that it is either MATIC (recommended) or it mentions “on Polygon” in the brackets. Otherwise, you have a risk of buying crypto on Ethereum network and spending huge transaction fees on moving from Ethereum to Polygon.

Depending on your country and laws conversion services may ask you additional questions to verify your identity. In some cases you may need to try several services before you find the one that works well in your country and asks questions you can answer



STEP 6. Donating to the Grant: Add to Cart => Checkout

To donate to the grant go to the grant page and add it to the Cart, then push “Checkout”



In checkout menu select the cryptocurrency of the donation (MATIC is recommended) and then click **“Polygon checkout”**. After that you have to confirm the transaction in Metamask browser extensions (it works more reliable than wallet connect for mobile wallets).

In rare cases transaction fails and sometimes they require to manually register the donations, do not be afraid of it.

If everything worked for you then:

Congrats on your first Gitcoin donation!

If you had issues with any of the steps or want to improve, please comment at https://docs.google.com/presentation/d/1E3_HsrqicY76ZdVQiru_AUEek1NYeOAXhJdvTmI0QDY/edit?usp=sharing