

BRAIINS

CHALLENGES OF DEVELOPING BOSMINER FROM SCRATCH IN RUST

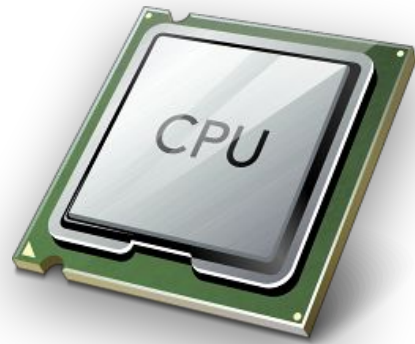
BRAIINS OS

SLUSH POOL

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Co-Founder & Co-CEO
@janbraiins



CGMINER



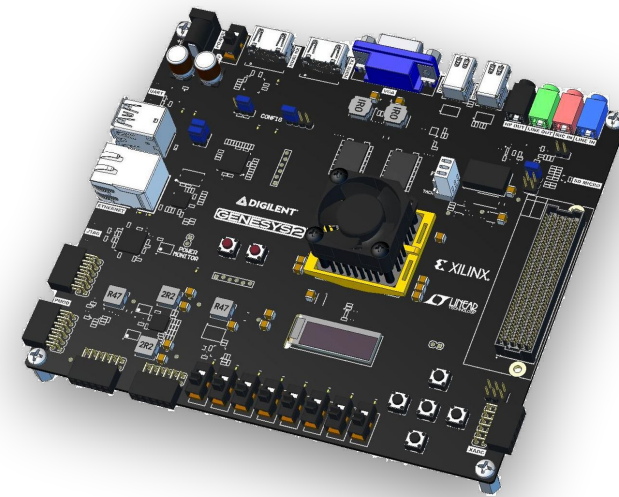
CPU

01



GPU

02



FPGA

03

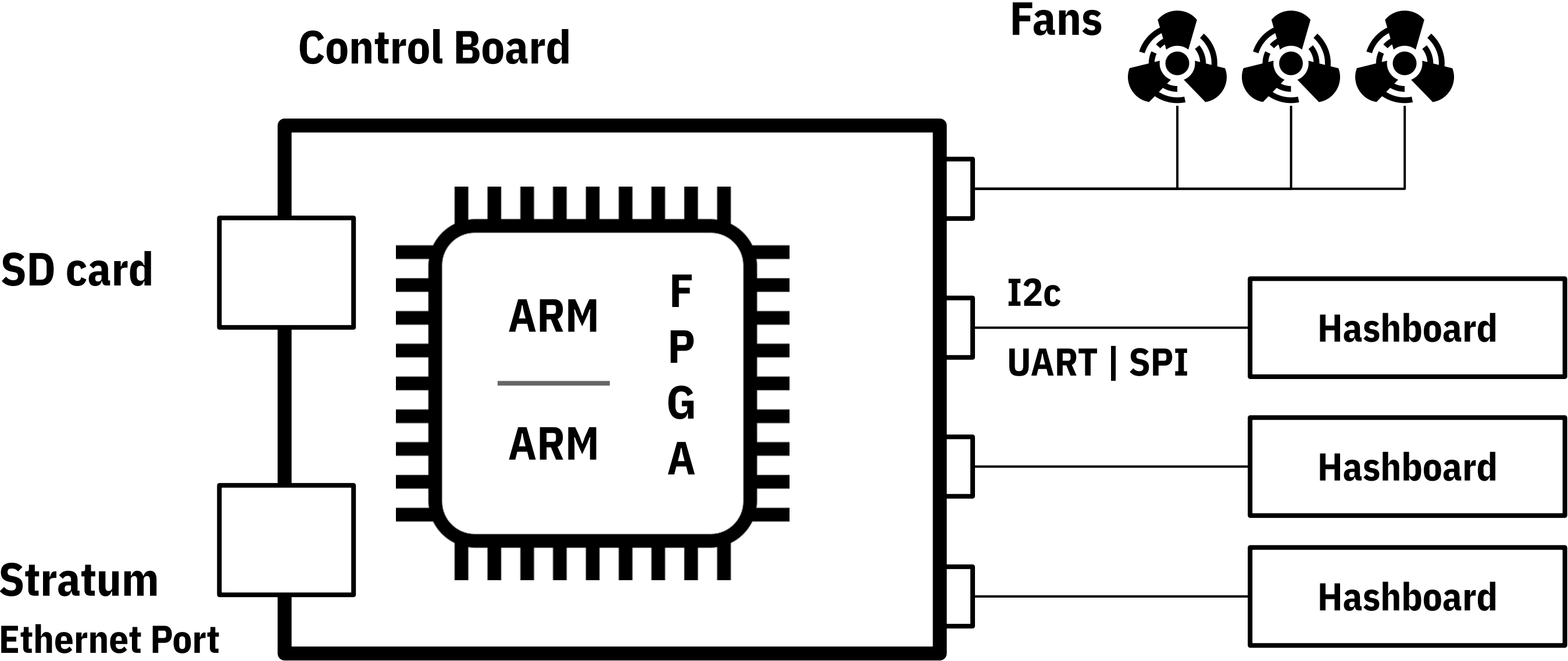


ASIC

04

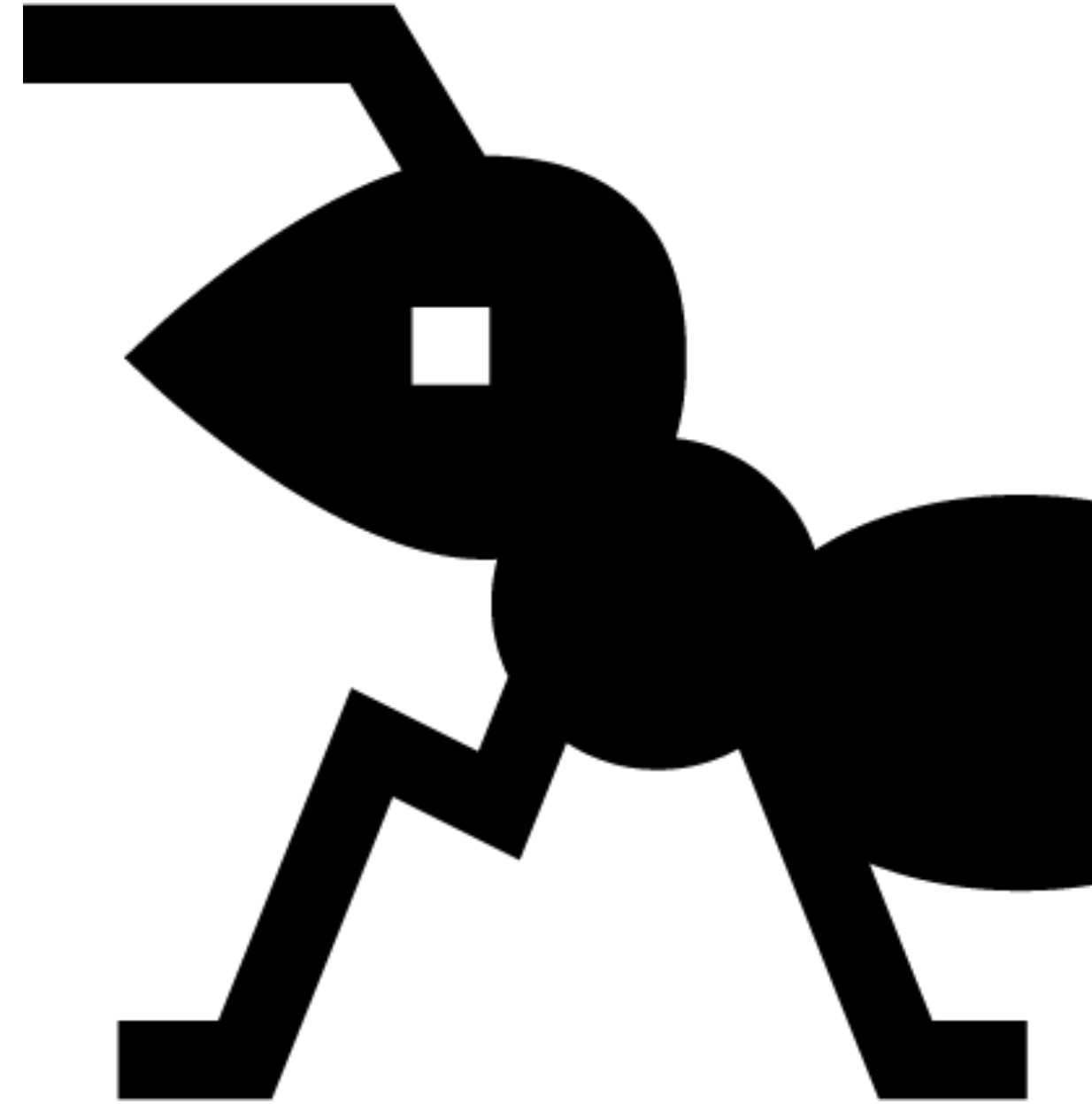
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HW Architecture



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LACK OF OPEN-SOURCE TODAY



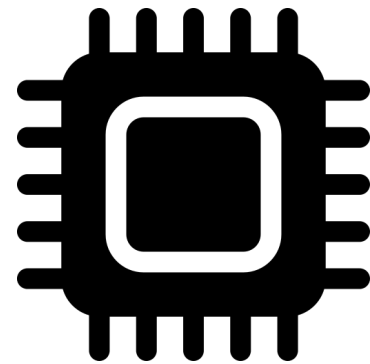
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**WHAT CAN WE DO
ABOUT IT?**



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WHY RUST?



**Memory safe
code**



**Packaging
ecosystem**

**01100
10110
11110**

The Beauty

BRA\NS

CHALLENGES

#01

FINDING SOFTWARE ENGINEERS



BRAINS

CHALLENGES

#03

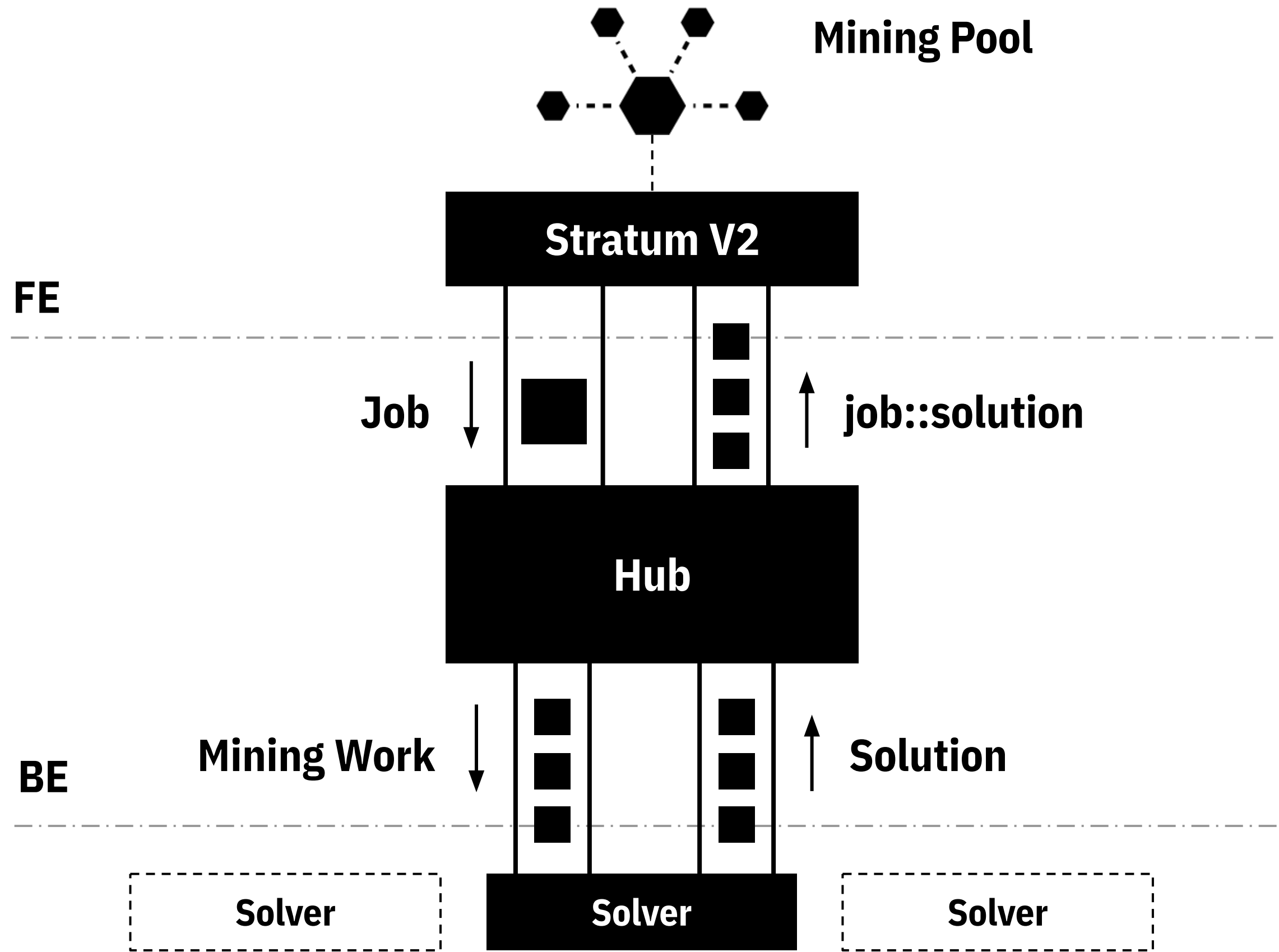
MULTI THREADING

VS

ASYNC

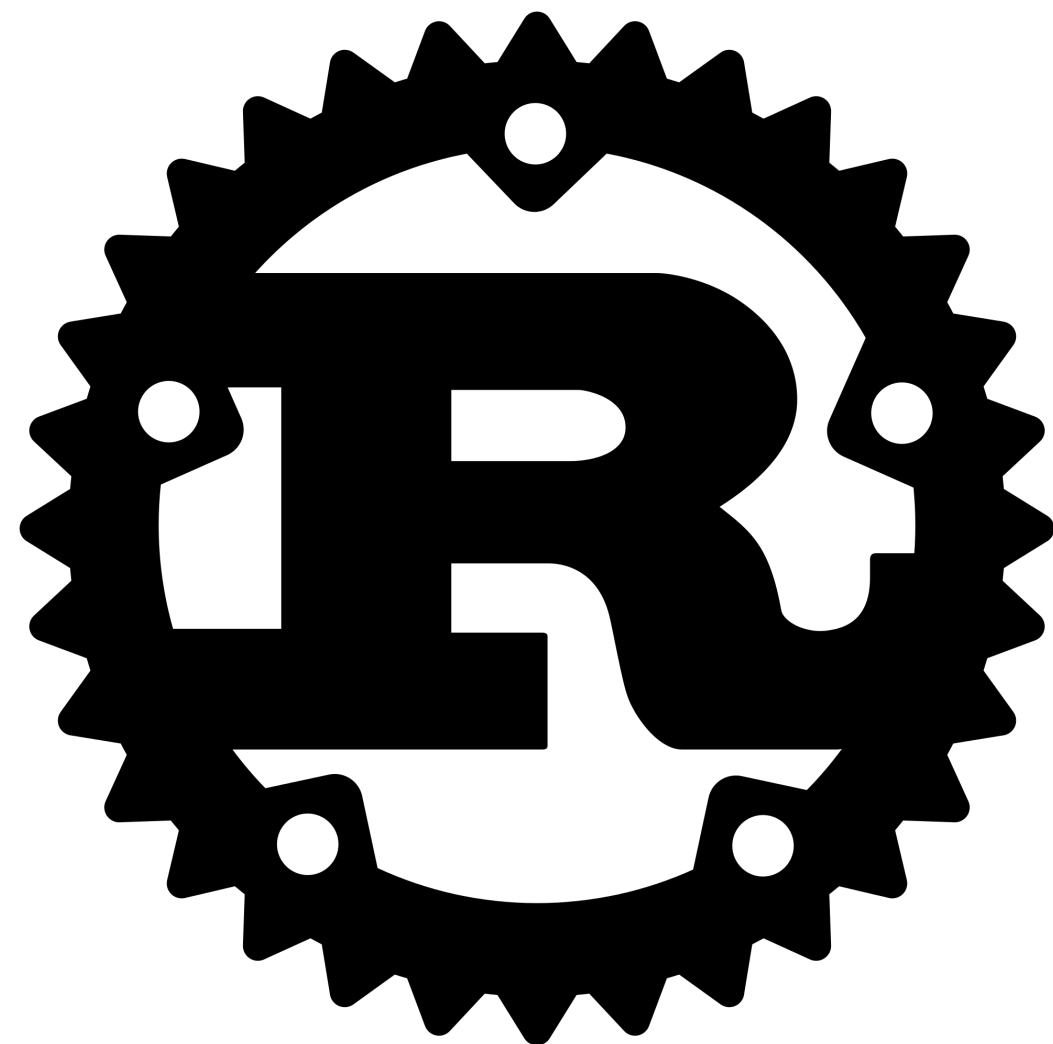
<https://areweasyncyet.rs>

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CHALLENGES



ON



#02

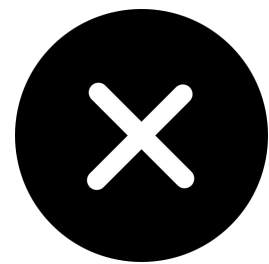
BRAINS

CHALLENGES

#04



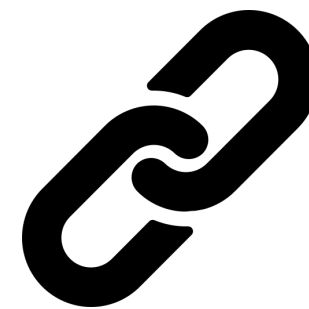
Logging



**Error
Handling**



**Bitcoin
primitives**



Serialization

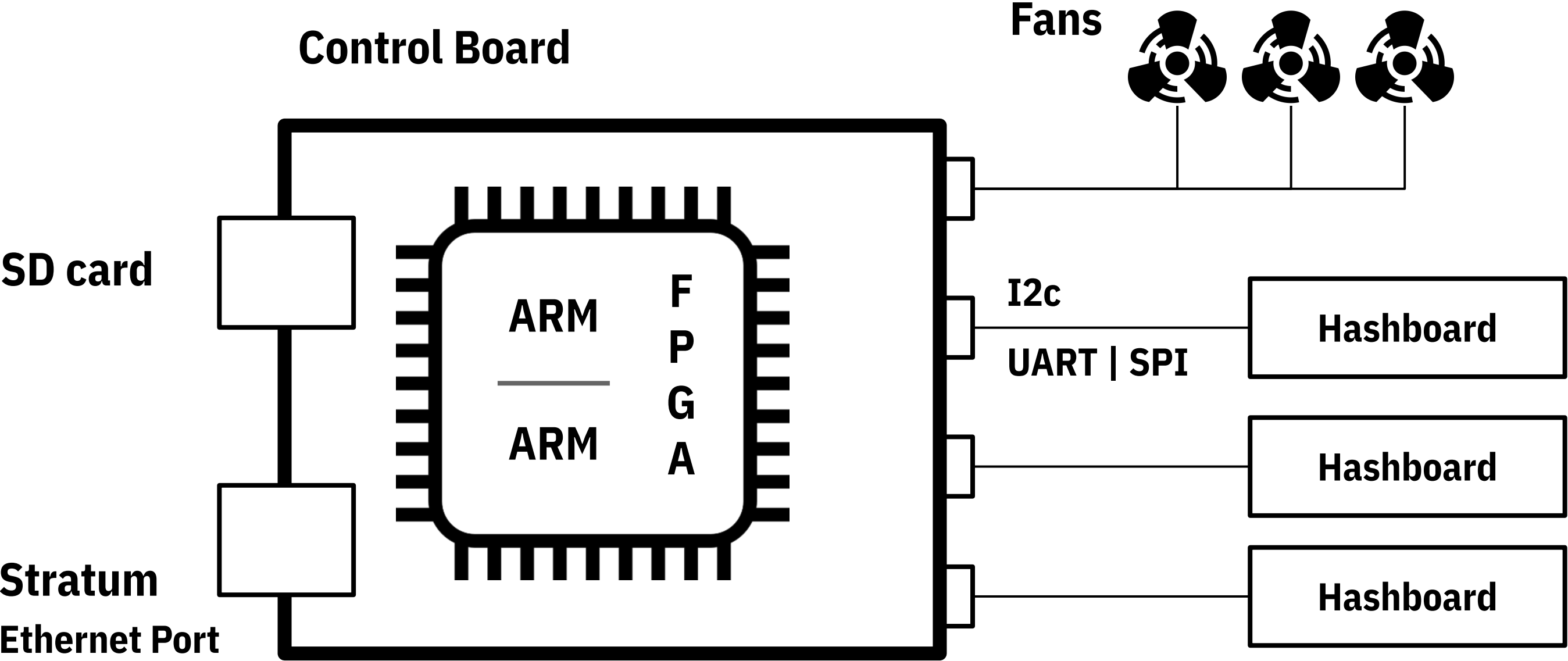
TOKIO

**Async
framework**

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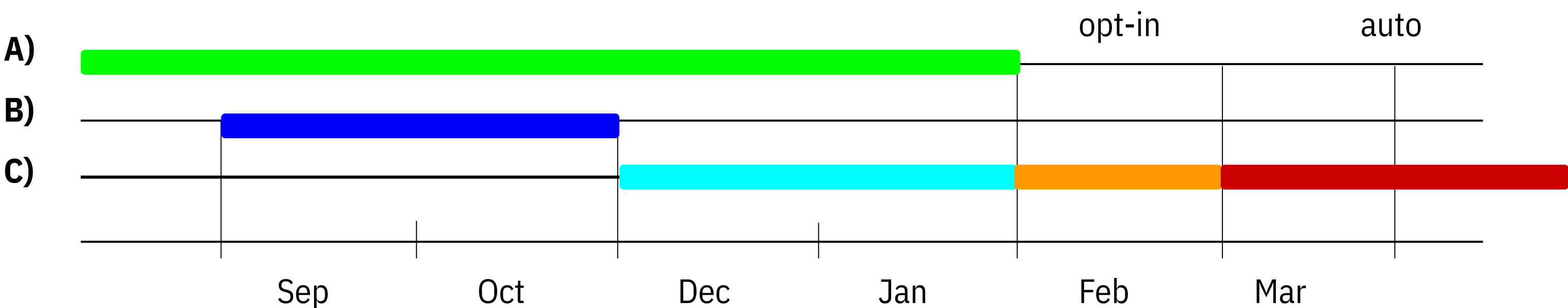
CHALLENGES

#05



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TIMELINE s/cgminer/bosminer/g



bOSminer

Stratum V2 Simulator

ii-stratum-proxy

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SHOWTIME



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See you at BHB2019

github.com/brainins/brainins

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SLUSH 

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