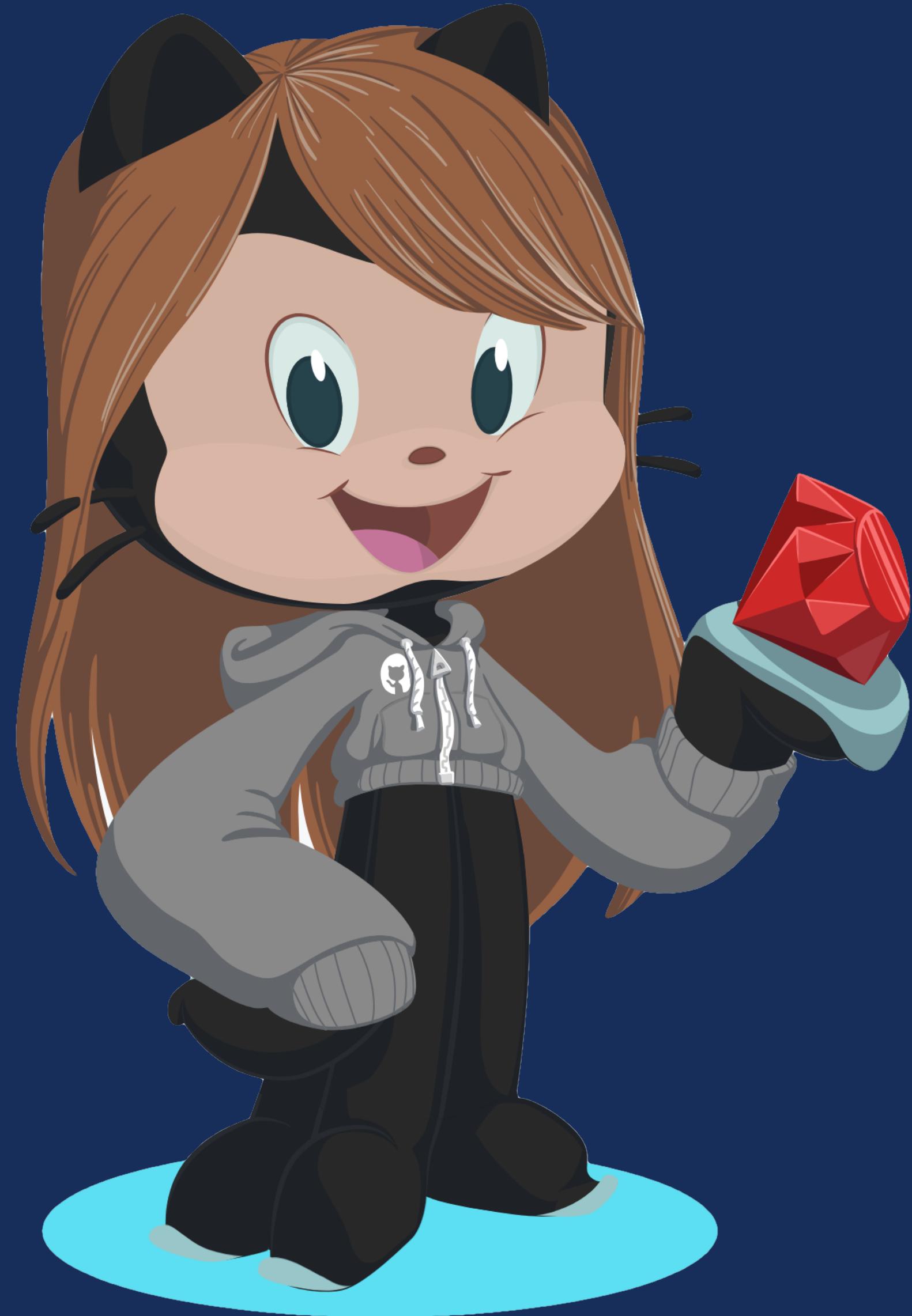
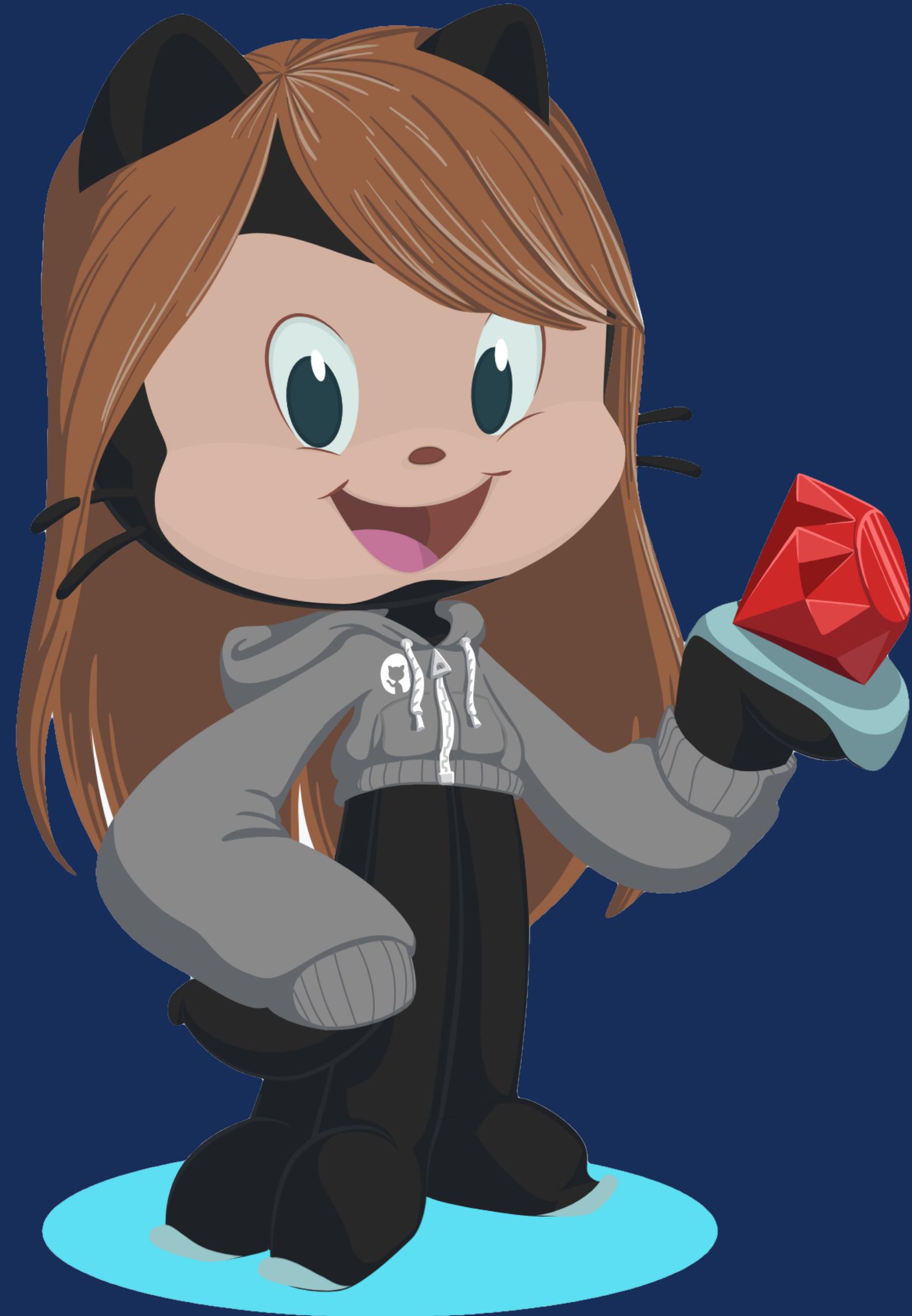


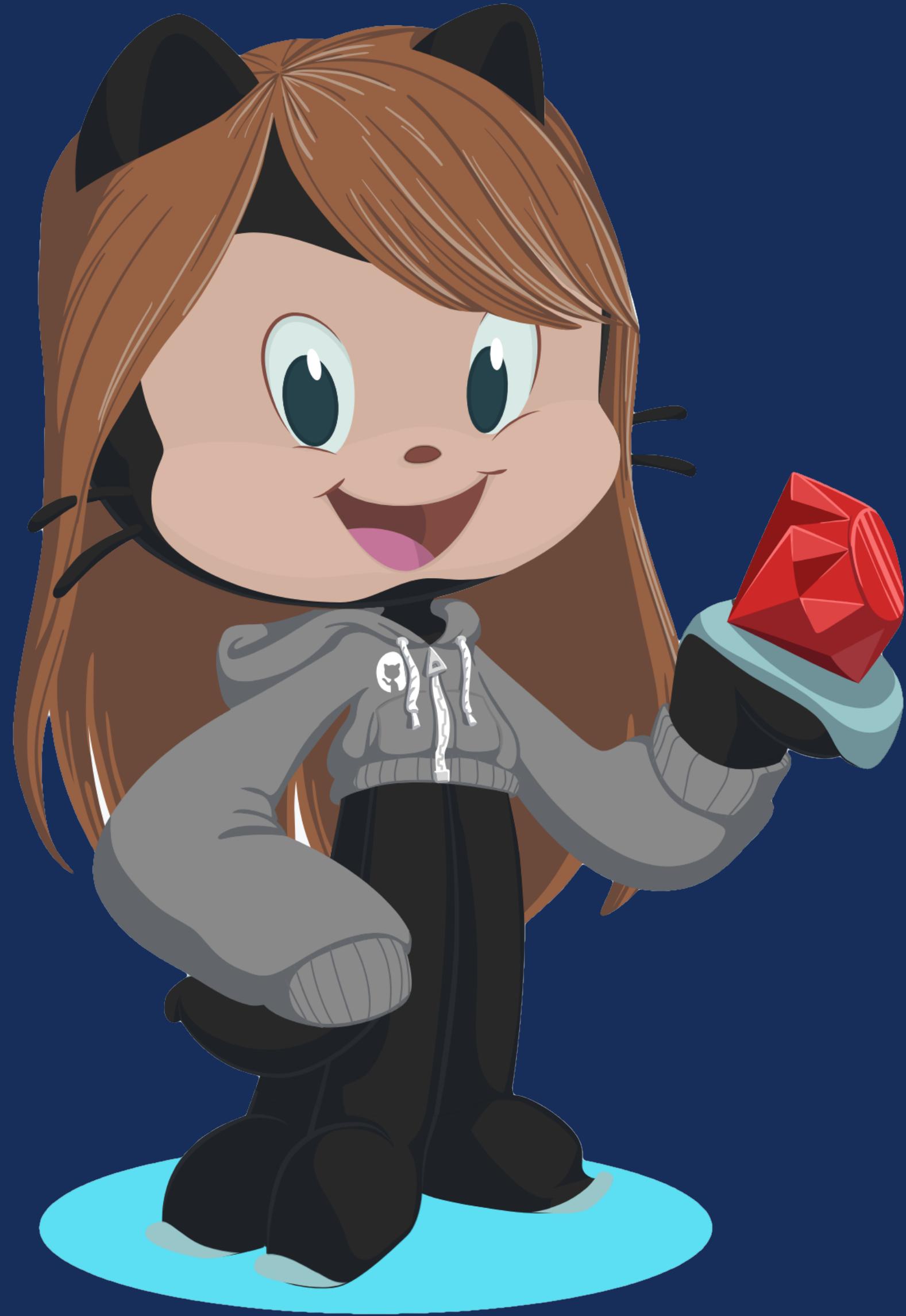
The Past, Present, & Future of at GitHub



Hi! I'm
Eileen M.Uchitelle
Handle: @eileencodes

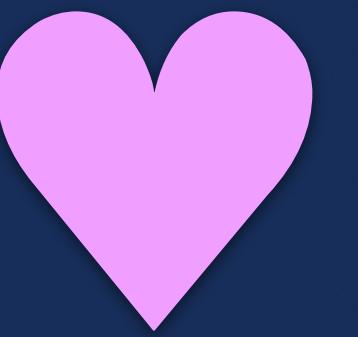


I'm a Staff
Engineer at
GitHub!



I'm on the
RAILS
Core team!

The Past, Present, & Future of at GitHub



RAILS

2004

Rails is
born



2004



-DHH

“Frameworks
are extracted,
not built.”

Rails 1.0

Rails is
born



2005



2004

Rails is
born



Rails 1.0



Rails 1.2



2004

2005

2006

2007



I built
a thing!





I'm in!

I built
a thing!



Rails is
born



Rails 1.0



GitHub
is born
Rails 1.2



2004

2005

2006

2007

GitHub launches

Rails is
born



Rails 1.0



GitHub
is born
Rails 1.2



2004

2005

2006

2007

2008

Rails
joins
GitHub
launches

Rails is
born

Rails 1.0

GitHub
is born
Rails 1.2

2004

2005

2006

2007

2008

Rails 1.0



2005

GitHub
is born
Rails 1.2



2006

Rails
joins
GitHub
launches



2007

2009

Rails 2.3



2006

2007

2008

2009

2010

GitHub
is born
Rails 1.2

Rails
joins
GitHub
launches

Rails 2.3

Fork
Rails





2006

2007

2008

2009

2010

GitHub
is born
Rails 1.2

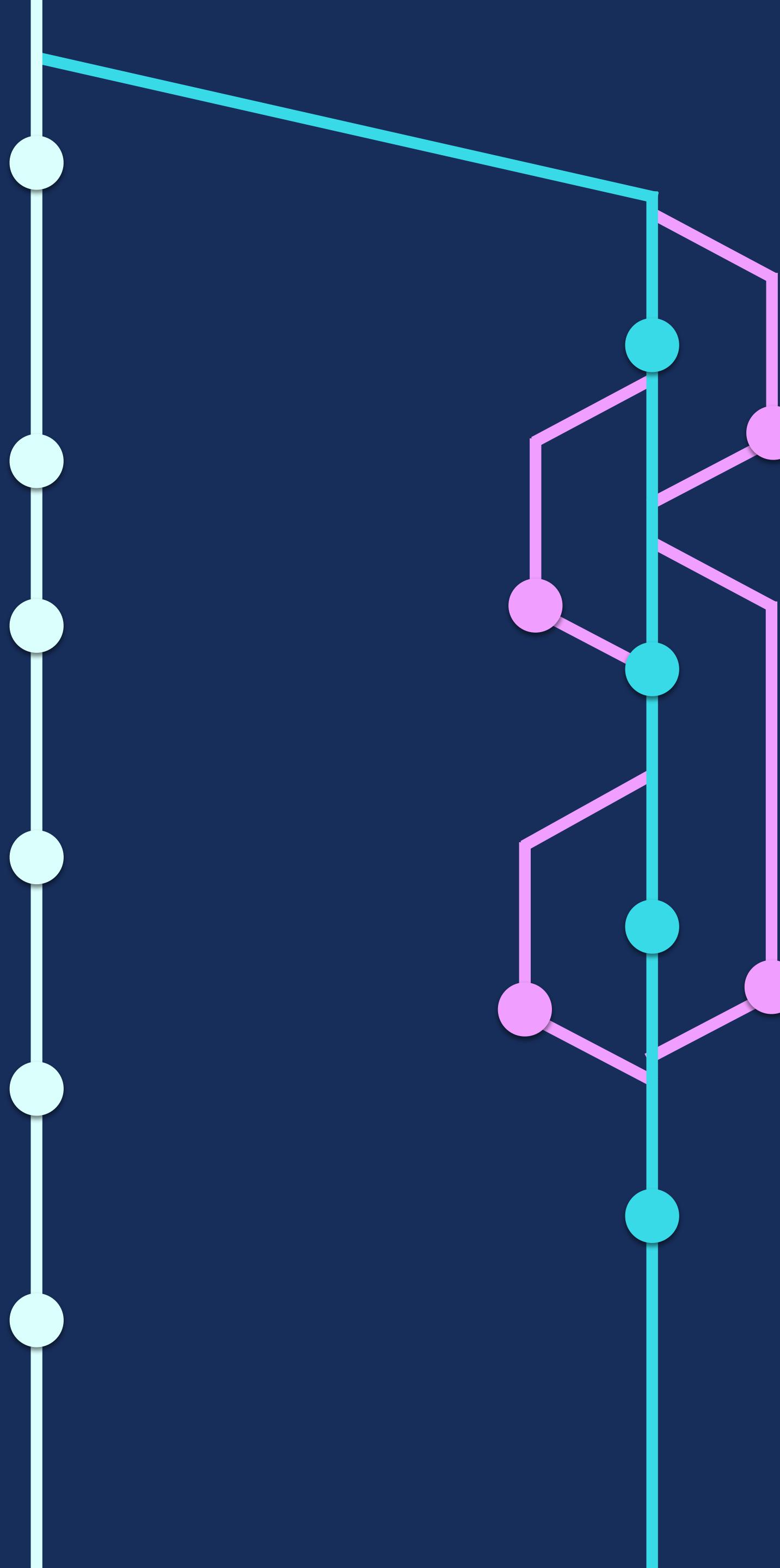
Rails
joins
GitHub
launches

Rails 2.3

Fork
Rails




repository



GitHub
fork


repository



GitHub
fork

2006

2007

2008

2009

2010

GitHub
is born
Rails 1.2

Rails
joins
GitHub
launches

Rails 2.3

Rails 3.0

Fork
Rails



Rails 3 Performance - Not Good Enough | Hacker News

<https://news.ycombinator.com/item?id=2549240> ▾

May 15, 2011 - But there are plenty more - reviewing rails gems for performance is There clearly still are performance problems in Rails 3.0.x that aren't ...

Severe performance issue in Rails 3.0.x PostgreSQLAdapter#select ...

<https://github.com/rails/rails/issues/485> ▾

May 10, 2011 - The following is partially related to #398 as it also covers a performance issue in PostgreSQLAdapter related to a huge amount of ...

Huge performance hit in Rails (3.0.20) from ruby 1.9.3p429 to 2p247 ...

https://github.com/banister/binding_of_caller/issues/37 ▾

Huge performance hit in Rails (3.0.20) from ruby 1.9.3p429 to 2p247 #37. Closed. gamov opened this Issue on Nov 8, 2013 · 6 comments ...

GitHub
is born
Rails 1.2

Rails
joins
GitHub
launches

Rails 2.3

Rails 3.0

2007

2008

2009

2010

2011

Fork
Rails

Start 3.0
upgrade



Fork
Rails

Start 3.0
upgrade



Rails
joins
GitHub
launches



Rails 2.3



Rails 3.0



Fork
Rails

Start 3.0
upgrade



Rails 3.2



2008

2009

2010

2011

2012



Rails
joins
GitHub
launches



Rails 2.3



Rails 3.0



Rails 3.2

2008

2009

2010

2011

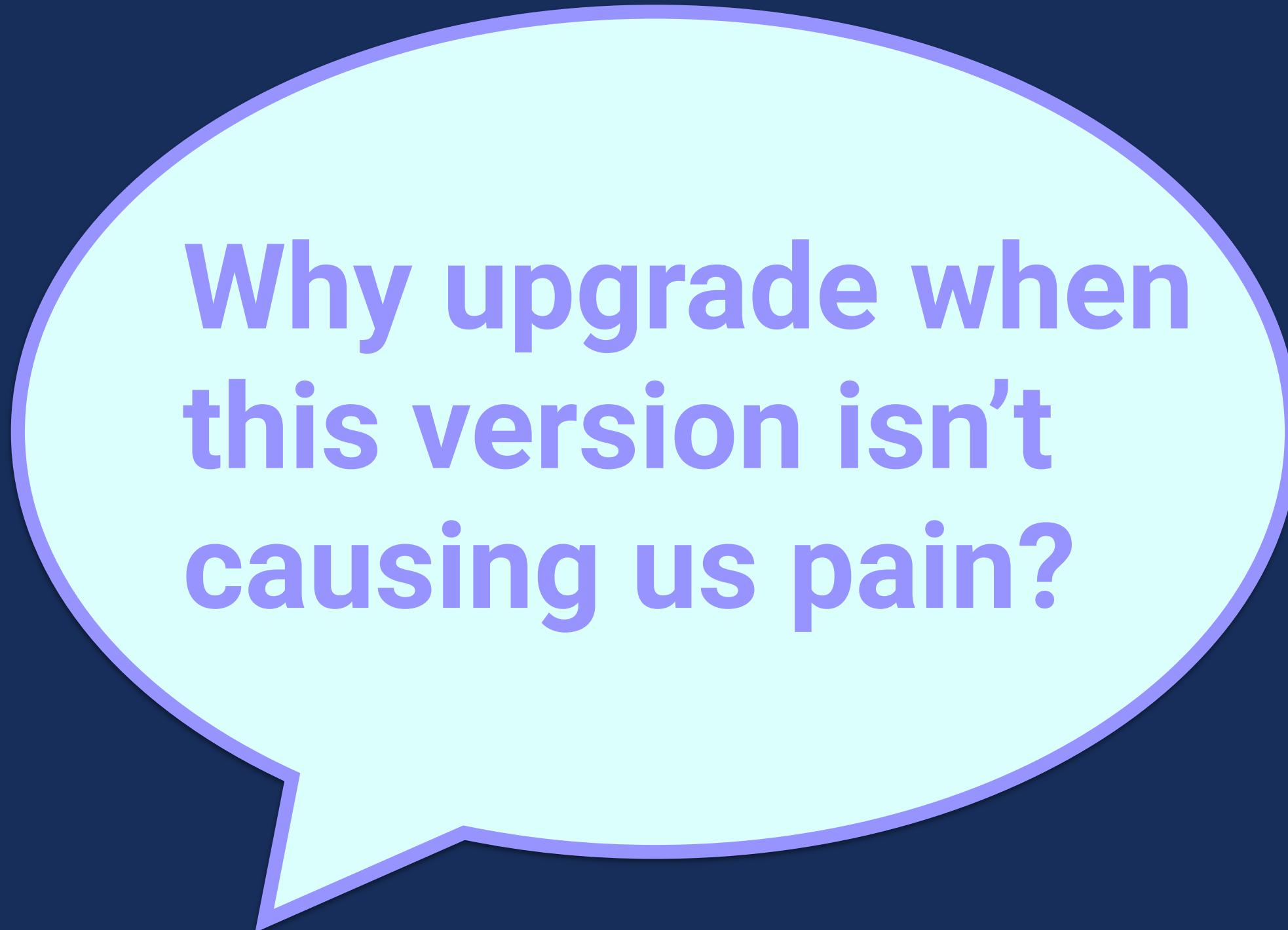
2012

Fork
Rails

Start 3.0
upgrade

Upgrade
stalled

**Why upgrade when
this version isn't
causing us pain?**



**Why upgrade when
this version isn't
causing us pain?**



**Why upgrade
when Rails 3
is slower?**

**Why upgrade when
this version isn't
causing us pain?**

**Why upgrade
when Rails 3
is slower?**

**Why upgrade
when our fork
is better?**



This version
is fine.

**SECURITY
BACKPORTS**



HIRING IS
HARDER SECURITY
BACKPORTS



HIRING IS HARDER

DEPENDENCIES ARE BRITTLE

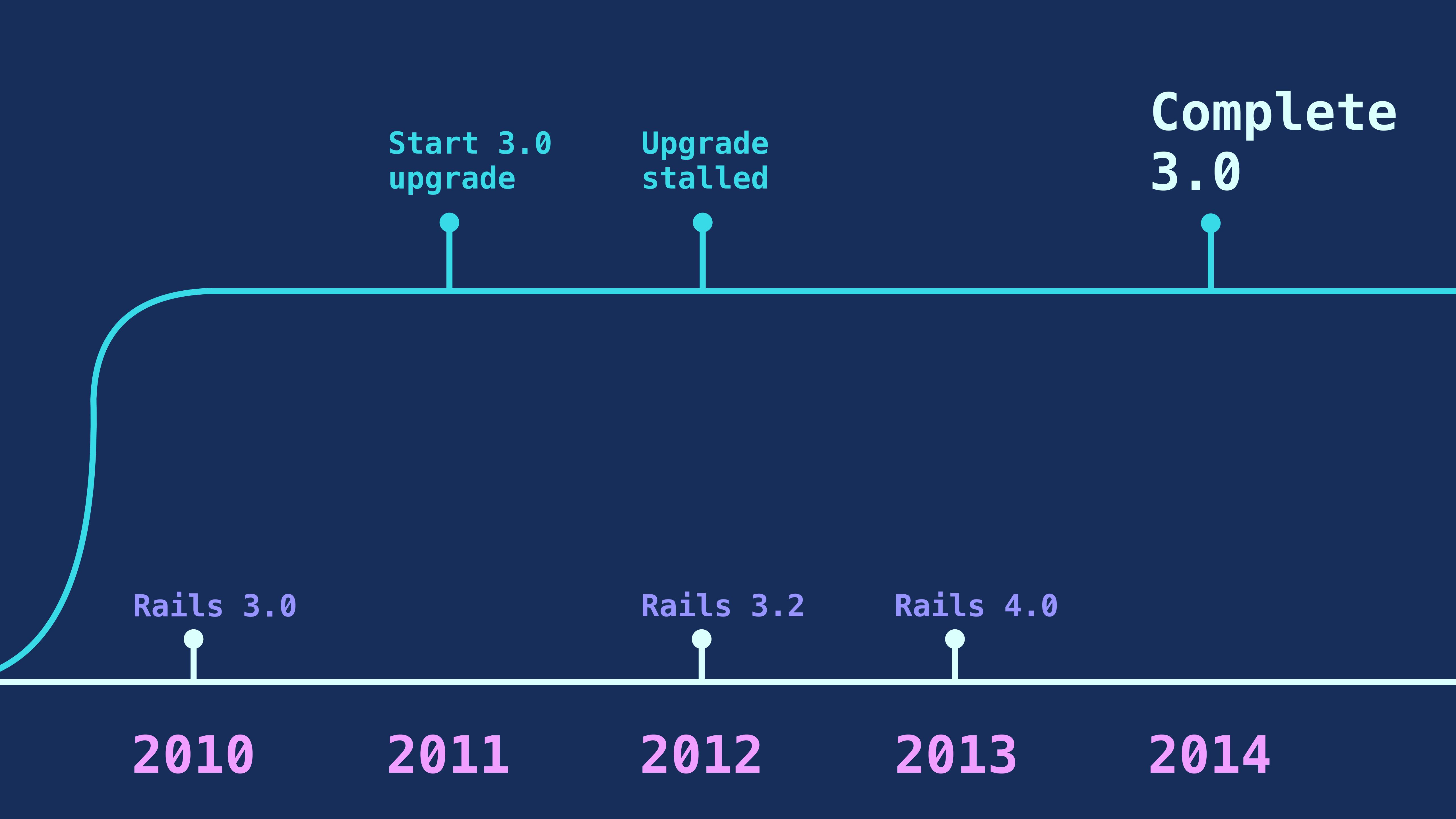
SECURITY BACKPORTS





DEVELOPMENT
IS PAINFUL
DEPENDENCIES
ARE BRITTLE
SECURITY
BACKPORTS

HIRING IS HARDER



Rails 3.2
2012

Rails 4.0
2013

Complete
3.0
2014

Upgrade
stalled

4.0
started
2016

Upgrade
stalled

Complete
3.0

4.0
started

Rails 3.2

Rails 4.0



Rails 5.0

2012

2013

2014

2015

2016

Rails 4.0

2013

2014

2015

2016

2017

Complete
3.0

4.0
started

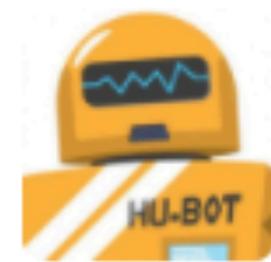
Eileen
joins





eileencodes 1:31 PM

hubot ci build github-rails4/rails-4-route-fixes



hubot APP 1:31 PM

Building github-rails4/rails-4-route-fixes



Hubot APP 1:34 PM

Build #5167415 (e911718) of github-rails4/rails-4-route-fixes failed - 48 failures,
4657 errors (212s, queued 0s)



2015

2016

2017

2018

2019

4.0
started

Eileen
joins

4.2
in prod

Rails 5.0



2015

2016

2017

2018

2019

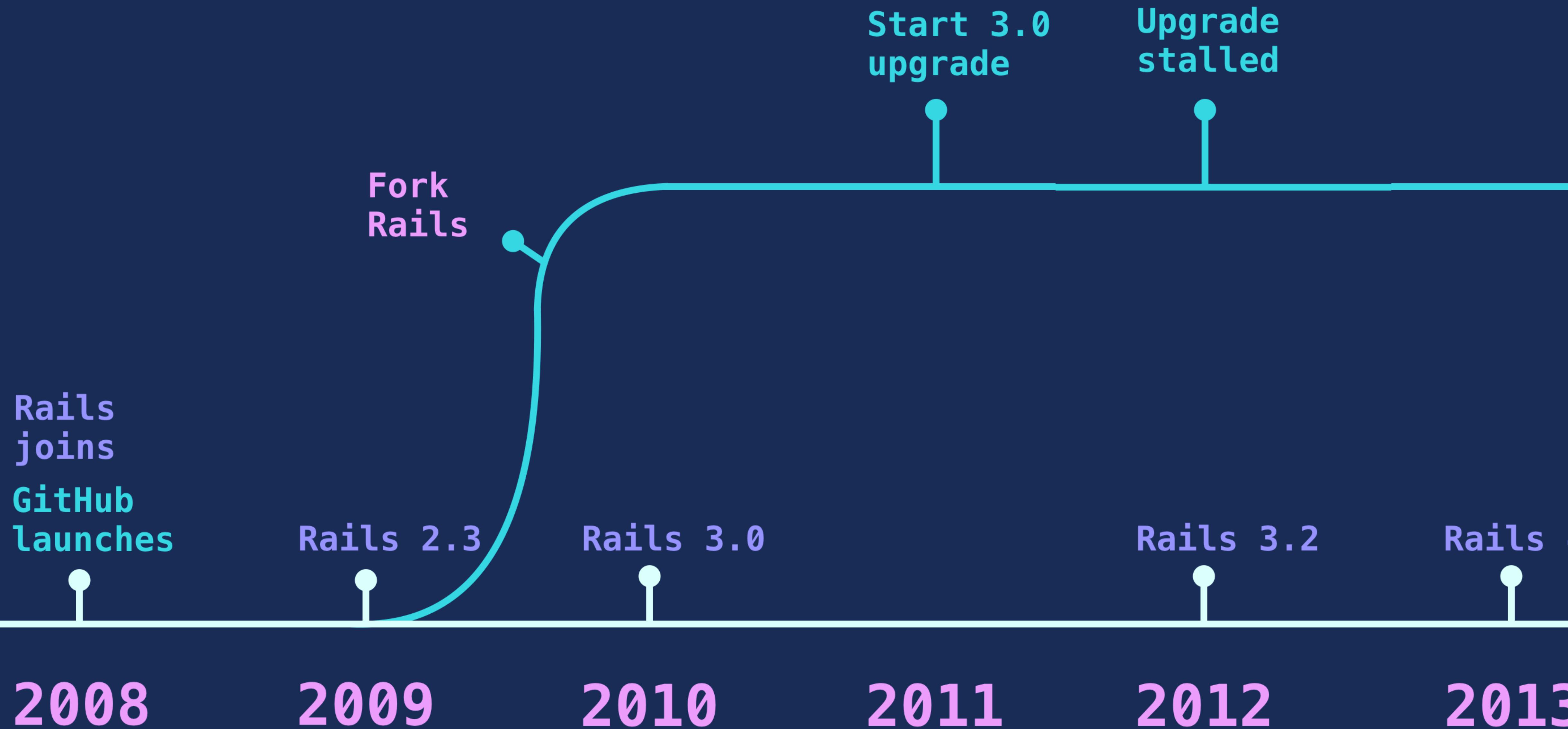
4.0
started

Eileen
joins

4.2
in prod

5.2
in prod

Rails 5.0





engineers at \$ /hr
for hours = \$

The cost of not
upgrading
is *immeasurable*

Upgrades are *not*
inherently *risky*.

**SECURITY
BACKPORTS**



HIRING IS
HARDER SECURITY
BACKPORTS



HIRING IS HARDER

DEPENDENCIES ARE BRITTLE

SECURITY BACKPORTS



DEVELOPMENT
IS PAINFUL
DEPENDENCIES
ARE BRITTLE
SECURITY
BACKPORTS

HIRING IS HARDER



**REWRITE
THE APPLICATION**

DEVELOPMENT IS PAINFUL

HIRING IS HARDER

DEPENDENCIES ARE BRITTLE

SECURITY BACKPORTS





- HN troll

“ ...the stories of upgrading
being a huge undertaking
always makes me scratch
my head - what are we doing
wrong if it's easy for us. ”

When upgrading you
should...

When upgrading you should
build a team.

When upgrading you should
take time to make
a plan.

When upgrading you should
**fix deprecation
warnings early.**

When upgrading you should
plan for the future.



I regret everything.

You may will regret
forking your framework.

You ~~may~~ will regret
falling behind security
releases.

You may will regret
deprioritizing upgrades.

What do you get
out of upgrading?



IMPROVED APIs



IMPROVED APIs SECURITY FEATURES



**IMPROVED APIs
SECURITY FEATURES
BETTER PERFORMANCE**



**IMPROVED APIs
SECURITY FEATURES
BETTER PERFORMANCE
NEW LIBRARIES**



IMPROVED APIs
SECURITY FEATURES
BETTER PERFORMANCE
NEW LIBRARIES
A CHANCE TO CONTRIBUTE

The Future...



200+ Pull Requests
from GitHub

Continuous Upgrades

For the first time in
Github's history...

We're *pioneering*
the *future* of Rails.

We have a
responsibility to
support Rails



**REWRITE
THE APPLICATION**

DEVELOPMENT IS PAINFUL

HIRING IS HARDER

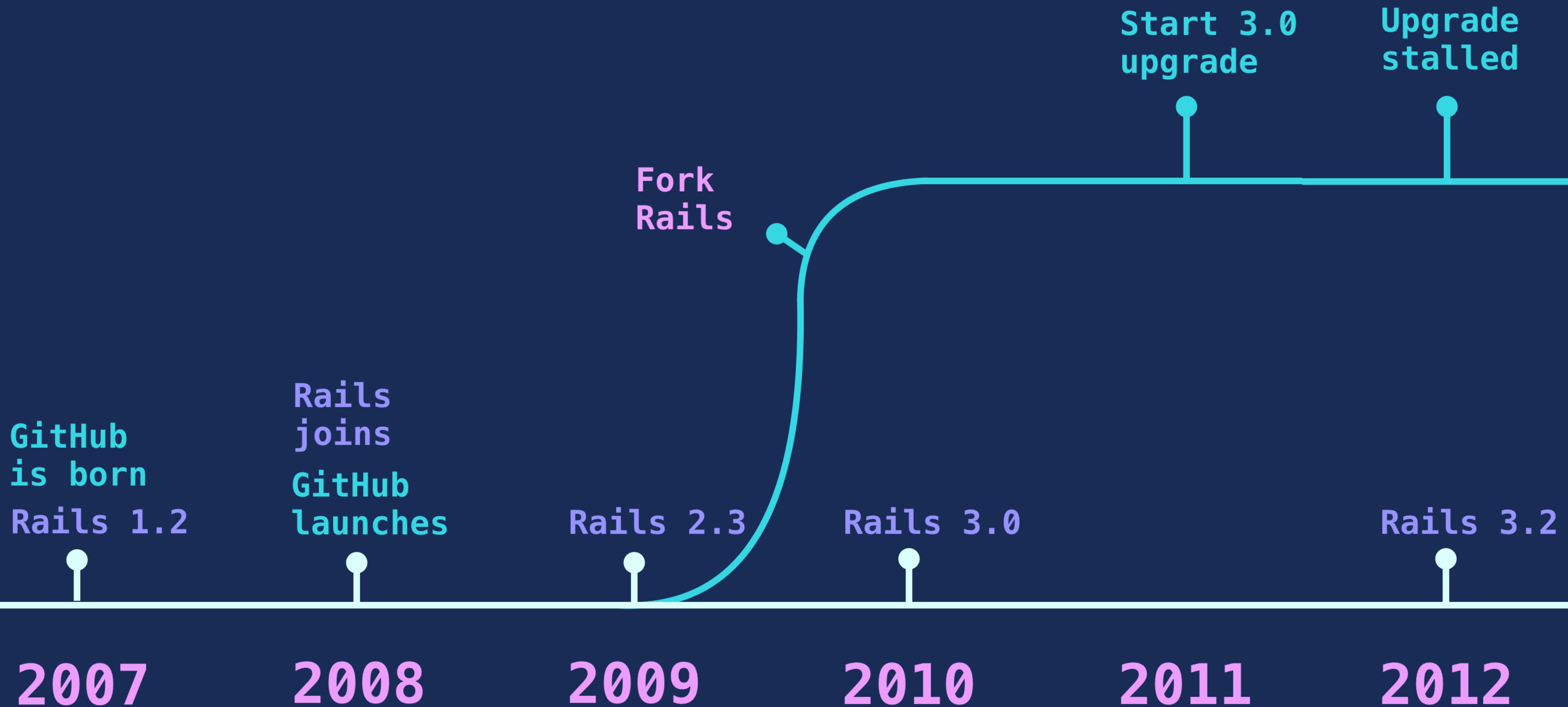
DEPENDENCIES ARE BRITTLE

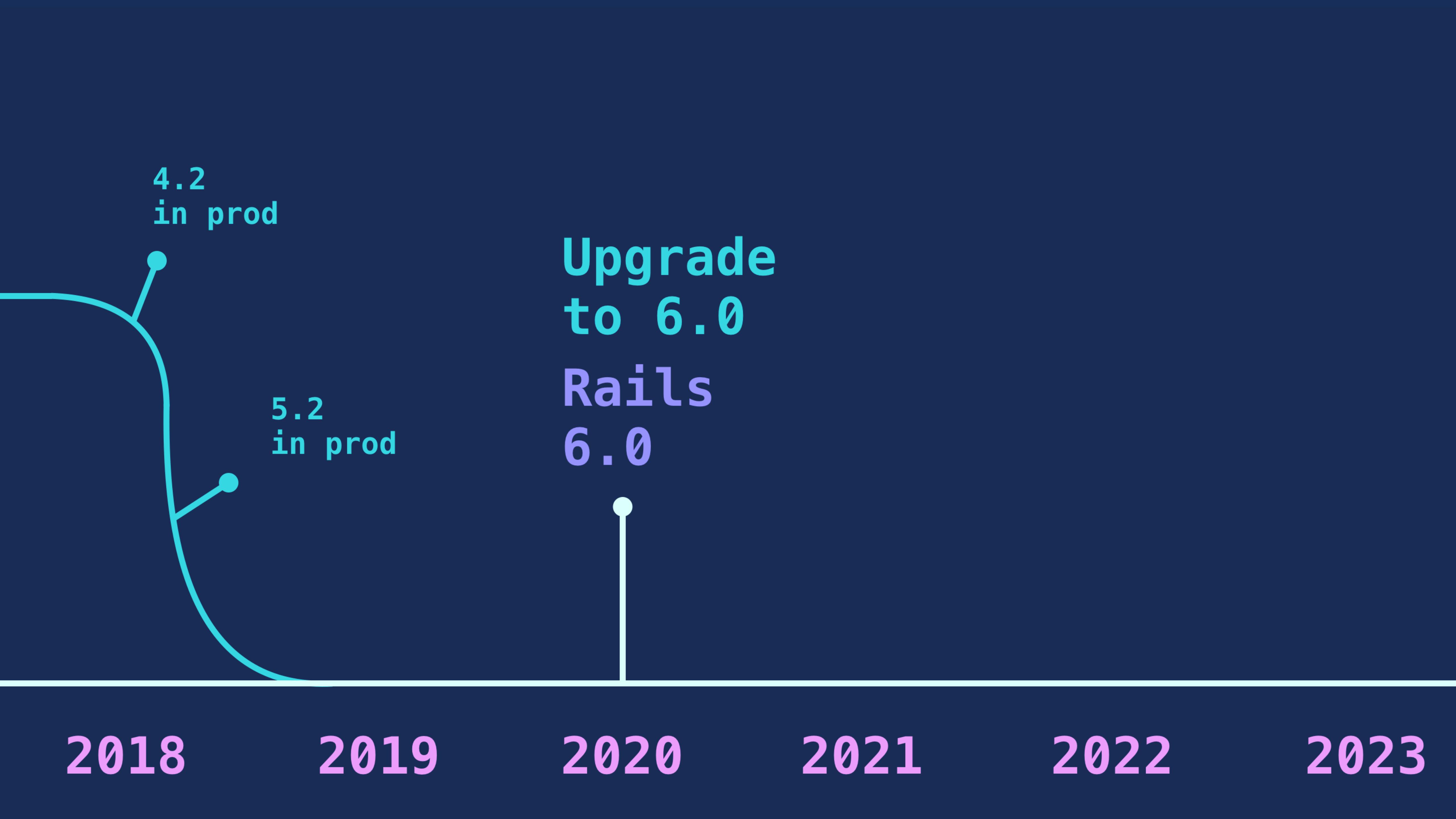
SECURITY BACKPORTS





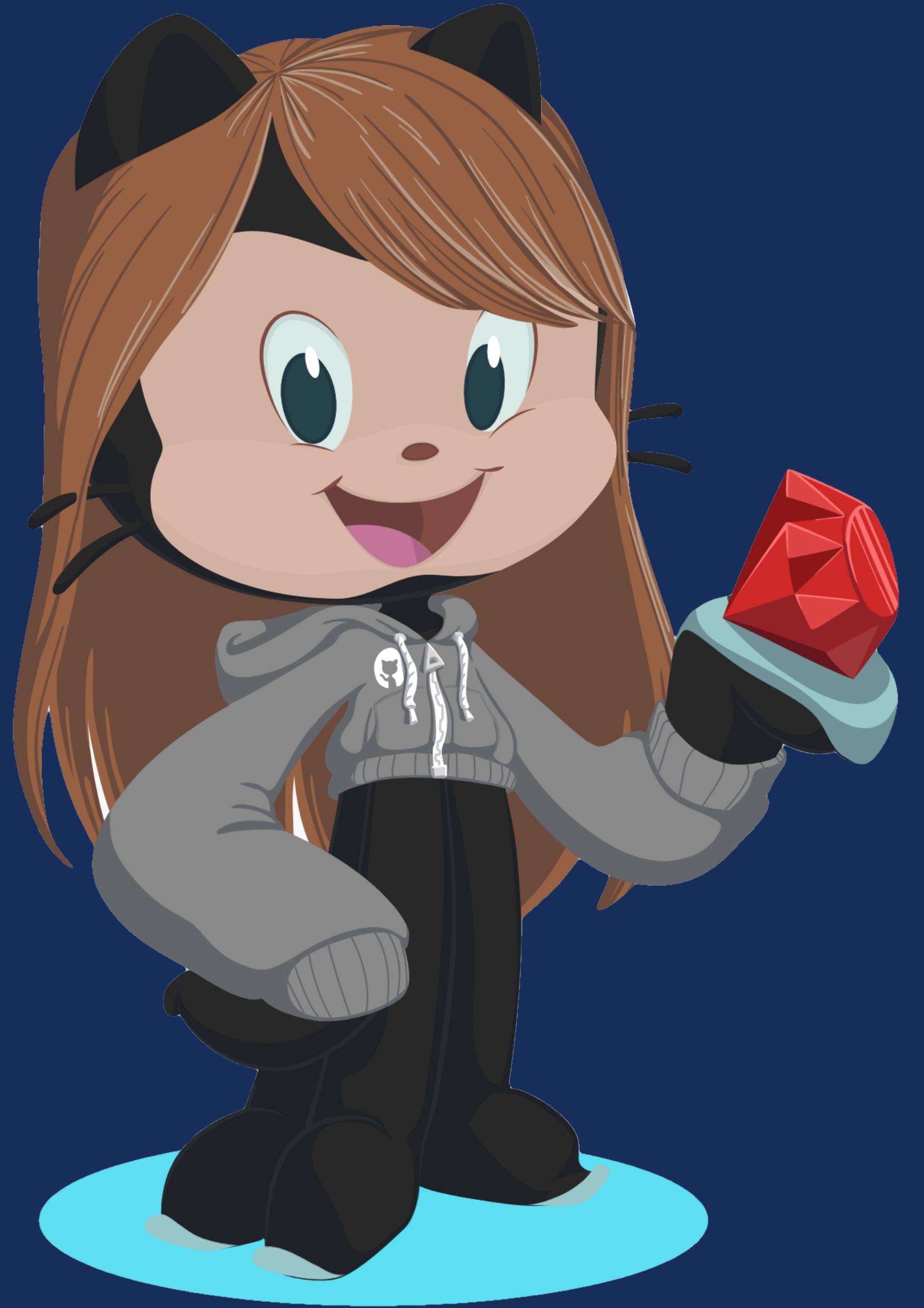
**IMPROVED APIs
SECURITY
BETTER PERFORMANCE
NEW FEATURES
A CHANCE TO CONTRIBUTE**







RAILS



Thank You!

Eileen M. Uchitelle
@eileencodes
eileencodes.com