

**Serverless Ruby**

**&**

**AWS Lambda**

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**Who built  
a blockchain-based  
chatbot  
and came for serverless?**

**IT'S A TRAP!**



**This talk is mostly**

**on**  **mruby**

**and not serverless**

**(and neither AWS)**

**Do you know mruby? 🙋**

**Applications**

**Embedded devices**

**Native applications**

**Scripting**

**Getting started**

**Know some Ruby**

**Know some C**

**Know Japanese**



**WHAT IS THIS?**

**RUBY FOR ANTS?**



~~require~~

~~stdlib~~


**mrbgems**

## Libraries

**mrbgems** is mruby's package manager. See the [mrbgems doc](#) for more information about how to use it.

Name	Description	Author
<a href="#">mruby-alarm</a>	Alarm Module	k0u5uk3
<a href="#">mruby-allegro</a>	mruby binding to Allegro 5	cremno
<a href="#">mruby-allocate</a>	Class allocate	ppiburr
<a href="#">mruby-ansi-colors</a>	Extends String class to use ANSI color escape codes.	Mav7
<a href="#">mruby-apr</a>	Cross platform standard library components à la MRI	Jared Breedon
<a href="#">mruby-arduino</a>	Arduino binding	kyab
<a href="#">mruby-argtable</a>	Argtable class	Uchio KondoStewart Heitmann
<a href="#">mruby-at_exit</a>	Kernel.at_exit method	ksss
<a href="#">mruby-audite</a>	Portable MP3 Player based on libmp123 and portaudio	Matthias Georgi
<a href="#">mruby-augeas</a>	Bindings to augeas	lutter
<a href="#">mruby-avl</a>	Avl Tree implementation	randym
<a href="#">mruby-aws-s3</a>	Client library for Amazon's (AWS) S3 REST API	ijj
<a href="#">mruby-b64</a>	Base64 for mruby with streaming interface	Hendrik Beskow
<a href="#">mruby-backtrace</a>	Display backtrace	crimsonwoods
<a href="#">mruby-base32</a>	Base32 Encoder/Decoder	qtakamitsu
<a href="#">mruby-base58</a>	Base58 Encoder/Decoder	h2so5
<a href="#">mruby-base64</a>	Base64 Encoder/Decoder	mattn
<a href="#">mruby-bcrypt</a>	OpenBSD-style Blowfish-based password hashing	Emanuele Vicentini
<a href="#">mruby-bignum</a>	Self-contained Bignum implementation for mruby	Ray Chason
<a href="#">mruby-bin-scite-mruby</a>	A SciTE based text editor with mruby scripting extension	Takashi Sawanaka
<a href="#">mruby-blendish</a>	Duangle OUI-blendish bindings.	Corey Powell
<a href="#">mruby-cache</a>	mruby inter process share memory cache	charlescui
<a href="#">mruby-capability</a>	Linux Capability Binding	MATSUMOTO Ryosuke
<a href="#">mruby-catch-throw</a>	catch and throw for mruby.	Corey Powell
<a href="#">mruby-cfunc</a>	Interface to C functions based on libffi.	Yuichiro MASUI
<a href="#">mruby-cgroup</a>	cgroup binding	MATSUMOTO Ryosuke
<a href="#">mruby-changefinder</a>	Detect change point via continuous outlier and smoothing	MATSUMOTO Ryosuke

# build\_config.rb



```
MRuby::Build.new do |conf|  
  conf.gem :github => 'mattn/mruby-curl'  
  conf.gem :github => 'k0kubun/mruby-yaml'  
  # include the default GEMs  
  conf.gembox 'default'  
end
```


**./minirake**


**A story**





master www-gitlab-com / data / **country\_no\_hire.yml** Find file Blame History Permalink

 **adding Ireland** 16581ddc  
Abby Matthews authored 2 months ago

 **country\_no\_hire.yml** 198 Bytes Lock Edit Web IDE Replace Delete

```
1 # Countries where we are unable to hire employees and contractors
2
3 - Brazil
4 - Crimea
5 - Cuba
6 - France
7 - Iran
8 - Ireland
9 - Japan
10 - North Korea
11 - Portugal
12 - South Korea
13 - Spain
14 - Sudan
15 - Sweden
16 - Syria
```

```
require 'yaml'
require 'open-uri'

unless GitLab.no_hire_countries.include?('France')
  Emailer.call
end

BEGIN {

class GitLab
  COUNTRIES_NO_HIRE_URL = 'https://gitlab.com/gitlab-com/www-gitlab-
com/raw/8e17aa630ba08102ef6aa4331f65fa01e119352a/data/country_no_hire.yml'

  def self.no_hire_countries
    YAML.load(open(COUNTRIES_NO_HIRE_URL))
  end
end

class Emailer
  def self.call
    Net::HTTP.post_form(
      URI("https://api:#{ENV.fetch('MAILGUN_API_KEY')}}@api.eu.mailgun.net/v3/#
{ENV.fetch('MAILGUN_DOMAIN_NAME')}/messages"),
      from: 'bot@lahmam.com',
      to: 'mehdi@lahmam.com',
      subject: 'GitLab is hiring in France ☐',
      text: 'Looks like France has been removed from the no-hire list: https://gitlab.com/gitlab-com/www-gitlab-
com/blob/master/data/country_no_hire.yml.'
    )
  end
end

}
```

```
class GitLab
  COUNTRIES_NO_HIRE_URL = 'https://gitlab.com/gitlab-com/www-gitlab-com/raw/master/data/country_no_hire.yml'

  def self.no_hire_countries
    YAML.load(Curl.get(COUNTRIES_NO_HIRE_URL).body)
  end
end

class Emailer
  def self.call
    Curl.post(
      "https://api:#{ENV.fetch('MAILGUN_API_KEY')}@api.eu.mailgun.net/v3/#
{ENV.fetch('MAILGUN_DOMAIN_NAME')}/messages",
      [
        'from=bot@lahmam.com',
        'to=mehdi@lahmam.com',
        'subject=GitLab%20is%20hiring%20in%20France%20%F0%9F%8E%89',
        'text=Looks%20like%20France%20has%20been%20removed%20from%20the%20no-
hire%20list%3A%20https%3A%2F%2Fgitlab.com%2Fgitlab-com%2Fwww-gitlab-
com%2Fblob%2Fmaster%2Fdata%2Fcountry_no_hire.yml.'
      ].join('&'),
      {
        'Content-Type' => 'application/x-www-form-urlencoded'
      }
    )
  end
end

unless GitLab.no_hire_countries.include?('France')
  Emailer.call
end
```

```
...    ...    @@ -1,31 +1,29 @@
1      - require 'yaml'
2      - require 'open-uri'
3      -
4      - unless GitLab.no_hire_countries.include?('France')
5      -   Emitter.call
6      - end
7      -
8      -
9      - BEGIN {
10     -
11     1     class GitLab
12     2       COUNTRIES_NO_HIRE_URL = 'https://gitlab.com/gitlab-com/www-gitlab-com/raw/8e17aa630ba08102ef6aa4331f65fa01e119352a/d
13     3
14     4       def self.no_hire_countries
15     -     YAML.load(open(COUNTRIES_NO_HIRE_URL))
16     5     +     YAML.load(Curl.get(COUNTRIES_NO_HIRE_URL).body)
17     6     end
18     7     end
19     8
20     9     class Emitter
21     10    def self.call
22     -     Net::HTTP.post_form(
23     -     URI("https://api:#{ENV.fetch('MAILGUN_API_KEY')}}@api.eu.mailgun.net/v3/#{ENV.fetch('MAILGUN_DOMAIN_NAME')}/messag
24     -     from: 'bot@lahmam.com',
25     -     to: 'mehdi@lahmam.com',
26     -     subject: 'GitLab is hiring in France 🇫🇷',
27     -     text: 'Looks like France has been removed from the no-hire list: https://gitlab.com/gitlab-com/www-gitlab-com/bl
28     11    +     Curl.post(
29     12    +     "https://api:#{ENV.fetch('MAILGUN_API_KEY')}}@api.eu.mailgun.net/v3/#{ENV.fetch('MAILGUN_DOMAIN_NAME')}/messages"
30     13    +     [
31     14    +     'from=bot@lahmam.com',
32     15    +     'to=mehdi@lahmam.com',
33     16    +     'subject=GitLab%20is%20hiring%20in%20France%20%F0%9F%8E%89',
34     17    +     'text=Looks%20like%20France%20has%20been%20removed%20from%20the%20no-hire%20list%3A%20https%3A%2F%2Fgitlab.comf
35     18    +     ].join('&'),
36     19    +     {
37     20    +     'Content-Type' => 'application/x-www-form-urlencoded'
38     21    +     }
39     22    )
40     23    +
41     24    end
42     25    end
43     26
44     27    - }
45     27    + unless GitLab.no_hire_countries.include?('France')
46     28    +   Emitter.call
47     29    + end
```

# lambda\_function\_wrapper.js



```
var spawn = require('child_process').spawn;
exports.handler = function(event, context) {
  var child = spawn('./lambda-function', [JSON.stringify(event, null, 2)]);
  child.stdout.on('data', function (data) { console.log("stdout:\n"+data); });
  child.stderr.on('data', function (data) { console.log("stderr:\n"+data); });
  child.on('close', function (code) { context.done(); });
}
```

# lambda\_function



```
#!/bin/bash
set -e
echo "Running mruby"
./bin/mruby gitlab_hiring_in_france_notifier.rb
```



```
zip gitlab-hiring-in-france-notifier.zip bin/ gitlab-hiring-in-france-notifier.rb lambda-wrapper.js
```



**[aws . amazon . com / lambda](https://aws.amazon.com/lambda)**



## ▼ Designer

### Add triggers

Click on a trigger from the list below to add it to your function.

API Gateway

AWS IoT


CloudWatch Events


CloudWatch Logs

CodeCommit


Cognito Sync Trigger



 gitlab\_hiring\_in\_france\_notifier

 CloudWatch Events ×

Add triggers from the list on the left

 Amazon CloudWatch Logs

Resources the function's role has access to will be shown here

## Function code [Info](#)

Code entry type

Upload a .ZIP file ▼

Runtime

Node.js 6.10 ▼

Handler [Info](#)

lambda-function-wrapper.handle

Function package\*

 Upload

For files larger than 10 MB, consider uploading via S3.

# Alternatives


I could have used

**Traveling Ruby**

**JRuby**

**Python, JS, Go, Java, C#**

**Live tour**

 [\*\*https://github.com/mehlah/  
gitlab-hiring-in-france-notifier\*\*](https://github.com/mehlah/gitlab-hiring-in-france-notifier)

**You liked mruby?**

**Give mruby-cli a try!**

**<https://github.com/hone/mruby-cli>**