

# My awesome journey with Open Source

Adam Sitnik

# About myself



## Senior Software Engineer & Team Leader

- Maintainer
  - BenchmarkDotNet (2 300+ stars on GitHub)
  - Awesome .NET Performance (720+ stars on GitHub)
- Contributor
  - Core CLR
  - CoreFx Lab
  - Exceptionless.Net, ImageProcessor, protobuf-net, SignalR, Autofac, ServiceStack.Redis, LinqOptimizer, ClrMD, MSOS

# The History of Open Source

You can make your own history!

# Open your eyes!



Adam Sitnik @SitnikAdam · 23.07.2015



to me this was an eye-opening post

**.NET/FRINGE/** @dotnetfringe

This post also explains why, even though Microsoft is hard core OSS these days, they're still not very present [bit.ly/1gQCnGU](http://bit.ly/1gQCnGU)

# What small startup did for .NET OSS to develop a single app?

- Added full CQL3 collisions support to FluentCasandra
- Invented **Helios**, a high performance **server-side socket** library
- **Ported Akka to .NET**
- Implemented Marmur3 and HyperLogLog algorithms in C#

Are you using any OSS?

xUnit  
Dapper  
Autofac  
JSON.NET  
NHibernate  
Quartz.NET  
Ninject  
SignalR  
Serilog  
NLog

# Have you ever...

- Maintained OSS project?
- Implemented a new feature?
- Fixed a bug?
- Improved the performance?
- Improved the docs?
- Reported a bug? with a nice repro case?
- Or maybe introduced a bug ?

# At this point of time

- I was anonymous .NET developer
- I knew I wanted to contribute to make a difference
- I had no idea how to start
- I did not know any contributors
- I wasn't even dreaming about speaking at the Big Conferences...
- Not to speak about drinking a beer with my Gurus!



# When your Guru starts a new project..



Joe Duffy @xjoeduffyx · 15.07.2015



Slice: a type for dealing with buffers inspired by building systems in C#. [github.com/joeduffy/slice](https://github.com/joeduffy/slice)... A work in progress but the gist is there.

🌐 Przetłumacz z języka: angielski



[joeduffy/slice](https://github.com/joeduffy/slice)

slice.net - A simple C# type for working with contiguous buffers.

[github.com](https://github.com)



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# My first contribution: what it was

- Build the benchmark in the Release mode
- Perform the Jit Warmup
- Cleanup the memory after every iteration
- One micro optimization

# Follow the coding standards (CONTRIBUTING.md)



joeduffy commented on `src/Slice.cs` in a97bb49 on 19 Jul 2015

Style nitpick, indentation looks off; maybe a tabs vs. spaces issue?



joeduffy commented on `src/Slice.cs` in a97bb49 on 19 Jul 2015

Style nitpick, errant spaces.

**You can get a code review from your Guru!!!**

# Choose the right Project

- Look for something that excites you!
- Prefer tools that you are familiar with
- Make sure they are looking for help!
- Make sure it's active!
- Make sure you are ok with the license!

# How to grab an issue?

Filters  Labels Milestones

☒ Clear current search query, filters, and sorts

☐ 15 Open ✓ 0 Closed

Author ▾ Labels ▾ Milestones ▾

☐ Simple API for path customization of Benchmark **up-for-grabs**  
#377 opened 18 days ago by AndreyAkinshin

☐ [Minor bug] Benchmark switcher: incorrect me  
#365 opened 28 days ago by ig-sinicyn v0.10.x

☐ Benchmark just stops (Antivirus problem) **bug**  
#364 opened 28 days ago by Konklaw

Filter by label

Unlabeled

☒ up-for-grabs

# Part of a daily job routine

## **Found a bug in OSS library?**

- Report it!
- **Provide a repro case!**
- Is it blocking your job?
- If so, can you fix it?

## **Need new feature?**

- The existing code base saved your company a LOT of time.
- So why don't you extend it?

**Just do it!**

Don't give up!



Ben Adams contributions to Kestrel HTTP Server (as of 2017-10-01 18:01)



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113



122

Use the tools that are free for the Contributors



Travis CI



AppVeyor



TeamCity



# Believe in yourself

- How do you know if you are good or not?
- Would you like to change job?
- Fork a project
- Pick up an issue
- Just solve it!
- Create PR

# You get invited to speak at Conferences



Adam Sitnik <adam.sitnik@gmail.com>

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**You have been selected to speak at NDC Oslo 2017**

2 messages

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**NDC Oslo** <info@ndcoslo.com>

2 March 2017 at 16:26

Reply-To: NDC Oslo <info@ndcoslo.com>

Yes, You still get rejected ;)

# Pair programming with the best



cesarbs on 28 Jan Member

@adamsitnik Would be glad to collaborate with you to get this more generalized and into BenchmarkDotNet 😊



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adamsitnik on 28 Jan

This week I am in Redmond for the MS LEAP, so we can even meet in person and talk about it ;) btw were you able to run this auto-generated dll? When I tried similar approach (to execute



cesarbs on 30 Jan • edited Member

Awesome! I'll send you an email so we can arrange when and where to meet.

# Advantages for the employer

- You learn new things all the time
- You use new things at work to do better job
- You build a network which helps you when you are in need
- You can promote your company by doing great things in public



# Getting the write access to your favorite tool



Adam Sitnik <adam.sitnik@gmail.com>

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## AndreyAkinshin added you to BenchmarkDotNet

1 message

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**Andrey Akinshin** <noreply@github.com>  
To: Adam Sitnik <adam.sitnik@gmail.com>

20 January 2016 at 11:22

You can now push to this repository.

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View it on GitHub:

<https://github.com/PerfDotNet/BenchmarkDotNet>

# When Guru use the feature you implemented

## DOTNEXT

Москва  
9 декабря


DotNext Moscow 2016 #dotnext | @goldshn <https://s.sashag.net/dnmoscow2>

### Vectorization: strstr

```
// Simple, no-frills approach:  
return haystack.Contains(needle);  
  
// Vectorized version:  
__m256i first = _mm256_set1_epi8(needle[0]);  
__m256i last = _mm256_set1_epi8(needle[ns-1]);  
for (int i = 0; i < hs; i += 32) {  
    __m256i block_first = _mm256_loadu_si256(&haystack + i);  
    __m256i block_last = _mm256_loadu_si256(&haystack + i + ns - 1);  
    __m256i eq_first = _mm256_cmpeq_epi8(first, block_first);  
    __m256i eq_last = _mm256_cmpeq_epi8(last, block_last);  
    unsigned mask = _mm256_movemask_epi8(_mm256_and_si256(eq_first, eq_last));  
    while (mask != 0) { ... memcmp(haystack + i + first_bit_set_pos + 1, ... )  
}
```

Method	Mean Time
Scalar	1,872.2798
SIMD	202.1229

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DOT NEXT

LUXOFT

RAVENDB

DOT NEXT

# Summary

- Plan minimum: report well described bugs.
- Contribute to something exciting at least once.
- Contributing should be a part of your daily job routine.
- Everybody gets rejected, so will you.
- You can benefit a LOT!
- You can sky rocket your experience and knowledge!
- You are not going to get paid for it.

# Sources

- [The Profound Weakness of the .NET OSS Ecosystem](#)
- [Free Services & Tools for Open Source .NET Projects](#)
- [All Pull Requests by Ben Adams to Kestrel](#)
- [What it feels like to be an open-source maintainer](#)
- [up-for-grabs.net](#)



# Questions?

[Adam.Sitnik@powel.com](mailto:Adam.Sitnik@powel.com)

Slides: <http://adamsitnik.com/files/NorwegianITNight.pdf>

Thank You!