



Zero to Open Source

Kamran Ahmed, Tradeling

April 18, 2020 7:00-9:00 AM UTC

Agenda Overview

11:00-12:55 pm

Time	Topic
11:00-11:10 pm	Kick-off
11:10-11:30 pm	Introduction
11:30-12:15 pm	Presentation
12:15-12:20 pm	Break
12:20-12:50 pm	Q&A Discussion
12:50-12:55 pm	Wrap up



Hosted by:

Vurgun Hajiyeu, CTO, ATL Tech

Experttech is tech meetup series to bring IT professionals & fans together. The goal of this meetup series is a commitment to the development of the local and global tech ecosystem. Bringing Tech Minds Together.

<https://bit.ly/3ahvmKO>

Sako M, DevOps, OpenGov

Build egoless, collaborative, competent, decentralized, scalable, fun community culture.

Structure and index the data flow within community.

<https://github.com/goupaz/02hero>



We want to know you!



<https://bit.ly/3akb2lq>

Our response to covid19 is opensource

- Has no prior experience - Go for Open Source
- Laid off - Go for Open Source
- Still at school - Go for Open Source
- Want to switch to tech - Go for Open Source
- Bored @ home - Go for Open Source

Photo Shoot Time



Please, turn on camera and smile!

Code of Conduct

Build with love, push with sugar, pull with caution

1. Language is **English**
2. We are here to **collaborate**: learn, benefit and contribute
3. We are here **equal**: despite our roles, accomplishments
4. **NO** marketing, selling, competing

Kamran Ahmed

Coding and Writing Stuff for Humans

Contact

Linkedin: [linkedin.com/in/kaamranahmed](https://www.linkedin.com/in/kaamranahmed)

Twitter: twitter.com/kamranahmedse

Education

BS — Software Engineering

Experience

Current:

Engineering Manager @ Tradeling, Dubai, UAE

Past:

Altayer, Tajawal, mostly startups



Special Guests



About me

- **Engineering Manager at Tradeling**
- Instructor at **Egghead.io**
- Worked mainly in startups
- Coding since ~~I was a kid~~ 2010
- Love building stuff and teaching
- Open Source and community

You might know me from

developer-roadmap

Roadmap to becoming a web developer in 2020

★ 104k 🍴 16.5k

12th / 200 Million Repositories



design-patterns-for-humans

An ultra-simplified explanation to design patterns

★ 27.9k 🍴 3.2k

Top 300 Repositories



driver.js

A light-weight, no-dependency, vanilla JavaScript engine to drive the user's focus across the page

● JavaScript ★ 11.1k 🍴 557

git-standup

Recall what you did on the last working day. Psst! or be nosy and find what someone else in your team did ;-)

● Shell ★ 6.6k 🍴 255

pennywise

Cross-platform application to open any website or media in a floating window

● JavaScript ★ 3k 🍴 156

<https://github.com/kamranahmedse>

<https://roadmap.sh>

<https://twitter.com/kamranahmedse>

roadmap.sh



Roadmaps Guides Sponsors FAQ Subscribe



104,202

Programming Guides

Easy to follow guides on complex topics written and maintained by the community

📝 WRITE A GUIDE

✉️ SEND ME UPDATES

Asymptotic Notation

Learn the basics of measuring the time and space complexity of algorithms



Kamran Ahmed

April 3, 2020

Big-O Notation

Easy to understand explanation of Big-O notation without any fancy terms



Kamran Ahmed

March 15, 2020

Random Numbers: Are they?

Learn how they are generated and why they may not be truly random.



Kamran Ahmed

March 14, 2020

How does the internet work?

Learn the basics of internet and everything involved with this short video series



Dmytro Bolkachov

February 29, 2020

Scaling Databases

Learn the ups and downs of different database scaling strategies



Kamran Ahmed

February 18, 2020

Building a BitTorrent Client

Learn everything you need to know about BitTorrent by writing a client in Go



Jesse Li

January 17, 2020

Levels of Seniority

How to Step Up as a Junior, Mid Level or a Senior Developer?

Design Patterns for Humans

A language agnostic, ultra-simplified explanation to design patterns

DNS in One Picture

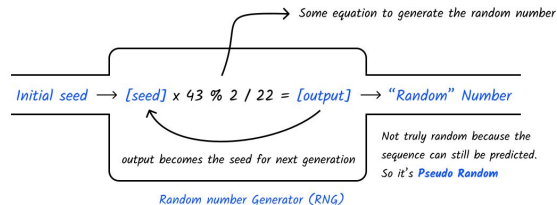
Quick illustrative guide on how a website is found on the internet.

Random Numbers

🐦 kamranahmedse

What happens behind the scenes to generate them?

There is nothing truly random when it comes to computers. Computers do what they are told to do. Random number generation is also done by an algorithm - a set of instructions that generates them.



How does it work?

- We provide the initial seed
- This seed is used in formula to generate a random number
- Output above is used as a seed for next output generation

```
// We provide the initial seed
random.seed(40);
random.generate(); // 49
random.generate(); // 32
random.generate(); // 34
random.generate(); // 38
```

Downsides to this

- If you provide same seed, you will get same results
- Sequence can be predicted

Intel tried to solve this

by developing **RDRAND** on their processing chips using which some readings are taken from the processor to generate a seed.

However, to make this seed more random, OSes combine it with some other parameters to make the outputs from RNG to be more random.

Partially fixable if we provide a good seed
e.g. time of system clock in ms + temperature
today + speed of wind + number of keys
pressed by user so far

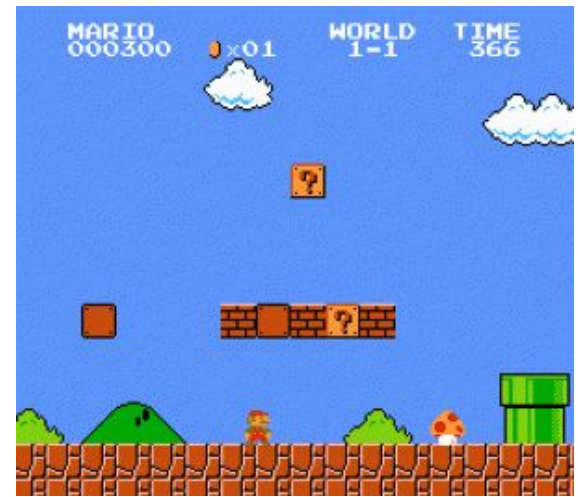
But still not truly random!

What are we going to cover

- What was my “Roadmap”?
- Why and how to get started with Open Source?
- Open Source Challenges.
- Where to look for ideas?
- How to grow your project?

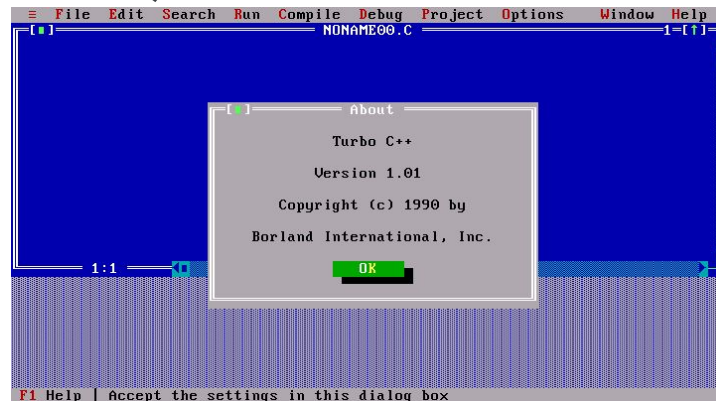
My First Computer

- First computer – Pentium 2 (2001)
- Playing Games
- Stick figure animations in Flash



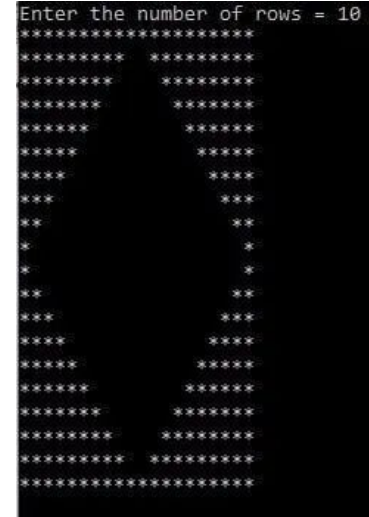
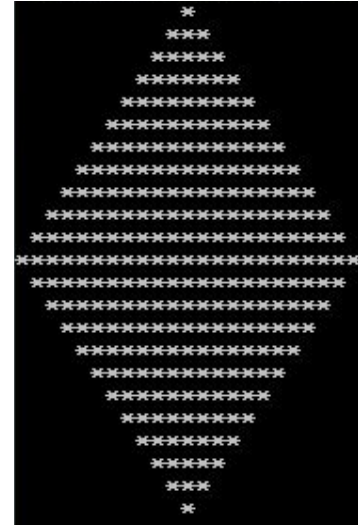
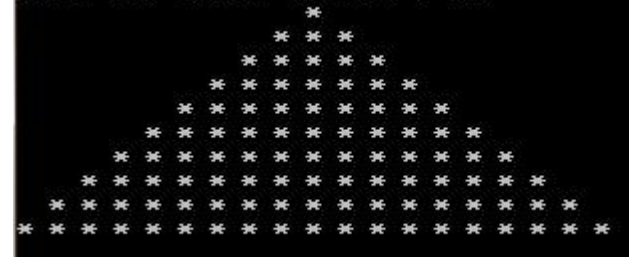
College Time (2010 — 2014)

- Electrical engineering?
- BS in Software Engineering
- Wrote my first “Hello World” in 2010
- Gold medalist of the batch



College Time (contd.)

- First few semesters
- Doing what's taught in college
- Found myself a coding buddy
- Practicing "C++"
- **Confusion!**
- **Lack of direction**





GC University Faisalabad NEWS Caster

A **google Chrome extension** that enables you to **stay up to date with latest GCUF news** with ease at a **blazingly fast speed**. Never miss any official announcement. Install this google chrome extension and all the GCUF news will be a **single click away**.

Like us on facebook **GCUF.Newscaster**



GC University Faisalabad NEWS Caster

Meht-e-Mealad in College of Law
Inter Department Quiz Competition
Seminar on Grading in Semester System
PEEF Scholarship Disbursement Ceremony Master Level Scholarship Session 2012-14 3rd Installment (September 2013-February 2014)
Meeting with National Accreditation Council for Teachers
Tender Notice 1565 (Supply of Fermenter for the Department of Botany)
PEEF Scholarship Disbursement 3rd Installment (September 2013-February 2014) PEEF Master Level Scholarship Session 2012-14
Mealad for Females
Departmental Quiz Competitions
List of Govt. Merit Scholarship District Toba Tek Singh on Account of the Result of the Secondary School Certificate / Intermediate / BA / B.Sc First Annual Examination 2013



IEEE-WIE PRESENTS

WOMEN IN STEM FORUM



A BETTER PLANET



ORGANIZERS: WIE LAHORE SECTION & IEEE WIE GCUF TEAM

Venue: Video Conference Room, Mian Yousaf block, GC University Faisalabad
Date: January 8th, 2012

Organizers: WIE Lahore Section & IEEE WIE GCUF Team
Venue: Video Conference Room, Mian Yousaf block, GC University Faisalabad
PARTICIPANTS ARE WELCOMED

IEEE WIE Presents
08.01.2013
TUESDAY
WOMEN IN STEM FORUM
A Better Planet

Objectives

Interaction of WIE Affinity Groups
Motivation and inspiration for the students
Professional leadership skills for female students
Social Responsibility
Career Counselling
WIE Membership Development
Networking with other societies
and much more.....



KamranAhmed
Software Engr.



About IEEE-WIE

Interaction of WIE Affinity Groups
Motivation and inspiration for the students
Developing leadership skills in female students
Professional Awareness
Social Responsibility
Career Counselling
WIE Membership Development
Networking with other societies
and much more.....

Becoming a Jack of all trades

- Graphics Designing
- Web Development (PHP, ASP, jQuery)
- Game Development (Unity 3D)
- Desktop Apps (C# .NET)
- Android Development
- Chrome Extensions
- **I kept learning stuff but..**

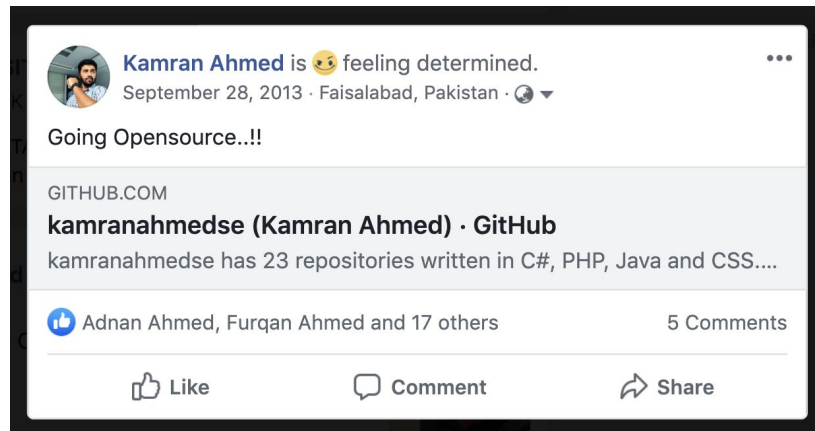


I kept learning different things but ..

- Getting a real job?
- Still unsure what I was going to do?
- Am I doing things the right way?
- Building stuff but eventually losing it
- Confined to the little circle that I had

My first introduction to Open Source

- Came across GitHub
- “Going Open Source”
- Pushing everything to GitHub
- Open Source huh?



@kamranahmedse

First “Open Source” Projects

- All my university assignments
- Random experiments
- Some of my freelance work 🤖
- Less Open Source, More of a code hosting
- No one cared: no stars, no forks
- But I kept making/publishing

php-geocode

- I was the only developer at a small service based company
- My first project with “open source” intentions
- Wrapper around the Google Geocoding API to get country, city, lat/lng, street etc from an address.
- The code was superb (..which it was not)
- Someone posted it somewhere (100 stars, 30 forks)



php-geocode

A wrapper around the Google Geocodin...

46 ★

php-geocode

- Someone opened a massive pull request with:

- Linting
- Code Sniffing
- PSR Integration
- Unit tests
- Refactored Code

- Single PR taught me a TON
- Completely changed how I code
- This single interaction..

Before

kamranahmedse Update usage in readme		Latest commit 51e4fbf on Oct 8, 2014
src	Add namespace	6 years ago
LICENSE	Add License	6 years ago
README.md	Update usage in readme	6 years ago
composer.json	Toying around with the namespaces	6 years ago

After

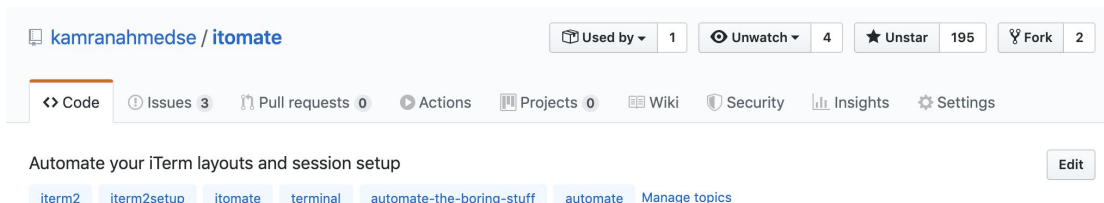
kamranahmedse Fix typo		Latest commit b79f868 on Nov 24, 2014
src	Neighborhood results (#14)	6 years ago
tests	← Allow access to Location short names (#12)	6 years ago
.gitignore	← Neighborhood results (#14)	6 years ago
.scrutinizer.yml	← Modification to test	6 years ago
.travis.yml	← Drop php 5.3 support	6 years ago
LICENSE	Update license	6 years ago
README.md	Fix typo	6 years ago
composer.json	Update and add maintenance notice	6 years ago
phpunit.xml	← Modification to test	6 years ago

..and so I continued building

- Total publicly available Open Source projects **65** (incl, forks)
- Total projects on my GitHub right now **97**
- I always have a side project
 - Something interesting that could be useful for others
 - Just some silly idea to learn something new
 - Proof of concept for something I recently learnt
 - Solving my own problems
 - A blog post to document what I learnt
- All the projects on my GitHub profile have a story behind them

iTomate

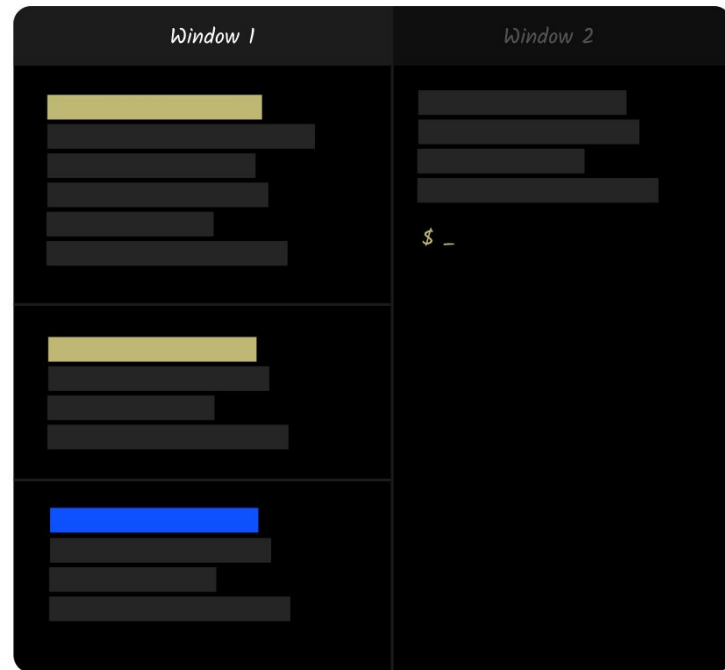
- Heavy iTerm user
- Solving my own problem
- Automate your iTerm layouts



You run itomate on config file

```
$ itomate -c session-config.yml
```

You get configured layout with commands executed



@kamranahmedse

git-standup

- Shows your commits in a project from your last working day
- My main contribution: The idea and the Source Code

The screenshot shows the GitHub repository page for `kamranahmedse / git-standup`. The repository has 11 users who used it, 90 unwatchers, 6.6k stars, and 255 forks. The navigation bar includes links for Code, Issues (11), Pull requests (2), Actions, Projects (0), Wiki, Security, Insights, and Settings. A message prompts the user to recall their last working day's commits. Below this, there are tags for `standup`, `git-standup`, `agile`, `meeting`, `git`, `git-addons`, and `git-`, along with a 'Manage topics' button. A summary bar shows 151 commits, 2 branches, 0 packages, 17 releases, 32 contributors, and the MIT license. At the bottom, there are buttons for 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. The commit history table lists the following:

Commit	Message	Time
kamranahmedse	Formatting and linting	Latest commit 1b0e73b 14 days ago
actions	Run formatter	14 days ago
snap	Add snapcraft support	16 months ago

Developer Roadmap

- Why did I make this
- **104K** Stars on GitHub
16.6K Forks
- The term “Roadmap”
- Things I learnt from it
- How has it benefited me

[kamranahmedse](#) / **developer-roadmap**

Roadmap to becoming a web developer in 2020

 Unwatch ▼

5.4k

 Star

100k

 Fork

16.1k

Developer Roadmap (frontend)

Frontend Developer

<https://github.com/kamranahmedse/developer-roadmap/#frontend-roadmap>

Developer Roadmap (backend)

Backend Developer

<https://github.com/kamranahmedse/developer-roadmap/#back-end-roadmap>

Developer Roadmap (devops)

Backend Developer


<https://github.com/kamranahmedse/developer-roadmap/#devops-roadmap>

Why Open Source




- Best way to get feedback on your work
- Proof that you really know what you are doing
- You put yourself out there, not only learn but help others learn
- You get to meet amazing people
- Being more than just the consumer
- The whole world is your audience
- Don't CRUD your life away
- Learn in the open


Businesses Around Open Source (Sidekiq)

- Sidekiq
<https://github.com/mperham/sidekiq>
- Podcast
[Building a \\$1 Million Business Solo](#)
[Sustaining Open Source with Sidekiq](#)
- Interview
[How Charging Money for Pro Features Allowed Me Quit My Job](#)

 **sidekiq**


Simple, efficient background processing for Ruby


 Ruby  10.2k  1.8k

 **Sidekiq**
Open-Source Background Jo...

1
Update

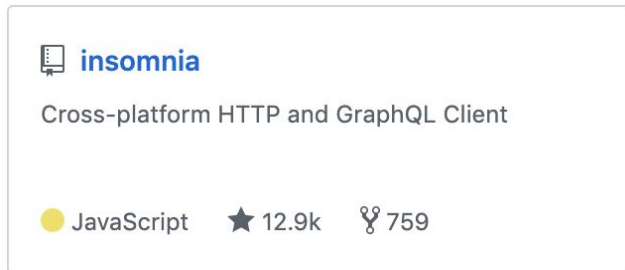
\$80K/mo
Revenue

 Website

 Follow


Businesses Around Open Source (Insomnia)

- Insomnia
<https://insomnia.rest>
<https://github.com/mperham/sidekiq>
- Got acquired by Kong
- Project Revenue and Progress (old)
<https://insomnia.rest/series/transparency>






Businesses Around Open Source (Spatie)


- If you work in Laravel or PHP you are probably using some of their packages
- Open Source to drive their business





Spatie


Webdesign agency based in Antwerp, Belgium

 Antwerp, Belgium  <https://spatie.be/open-source>  info@spatie.be

 **Repositories** 279

 Packages

 People 9

 Projects

How to Contribute to OpenSource

- Everybody has something that they can give
- Everything that you give has a value.
- Types of contributions
 - Making your own project
 - Opening a pull request with a bug fix, documentation update, typo fix
 - Submitting an issue
 - Answering issues on a project
 - Thanking the contributor
 - Spreading the word

Tips to get Started

- Always have a side project
- Contribute to existing projects
 - Finding a project
 - What to contribute
 - How to contribute
- Making your own project
 - Picking up an idea
 - How to find time
 - Building the project
 - **Tell people** 🏠🏠🏠🏠🏠🏠🏠

How to tell people

- Post on [Reddit](#)
- Put it on news.ycombinator.com
- Put it on lobste.rs
- Tweet about it
- Share it on [LinkedIn](#) (yes you read that right)
- Post it on [Indiehackers](#)

Some of the Learnings

- Maintaining > Contributing
- You will always be embarrassed of your code
- You might be overwhelmed by the issue backlog
- There might be flame wars
- Empathy, Respect
- Make yourself happy first
- Don't be all alone
- Don't take the negative feedback to heart

Staying up to date

- Follow the relevant subreddits
 - [/r/programming](#), [/r/coding](#), [/r/learnprogramming](#), [/r/softwareengineering](#)
 - [/r/webdev](#), [/r/webdesign](#), [/r/linux](#), [/r/cscareerquestions](#), [/r/experienceddevs](#)
 - [/r/devops](#), [/r/javascript](#), [/r/reactjs](#), ...etc
- Hacker News [news.ycombinator.com](#)
- Lobsters [lobste.rs](#)
- Twitter
- [GitHub's Trending Page](#) or [kamranahmed.info/githunt](#)

5 mins break

Q&A Discussion



<https://bit.ly/3akb2lq>

Wrap-up

Feel free to reach out.



Collaborate, contribute, benefit !

Find me anywhere at

- @kamranahmedse

We love Feedback



<https://bit.ly/2ytJV0j>

Thank you!