Development tools. Summer Camp practice intro

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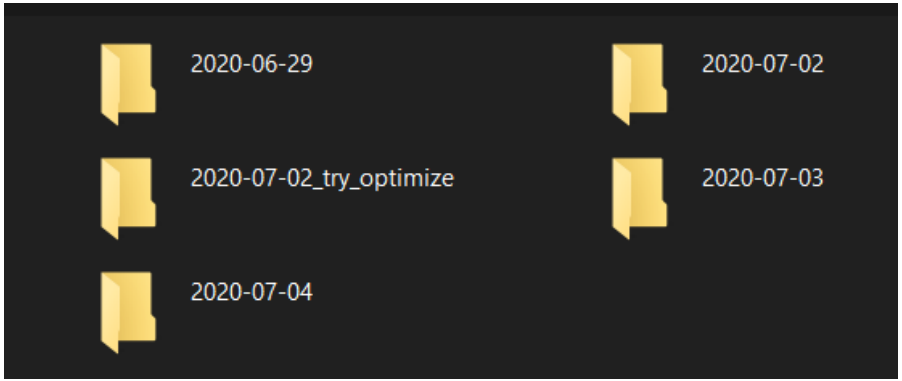
Agenda

- Version Control System (VCS)
- Contiguous Integration (CI)
- Practice overview

*Other names and brands may be claimed as the property of others.

My project lifecycle before



- Keep project files locally or on external storage
- Version by dates or by significant changes

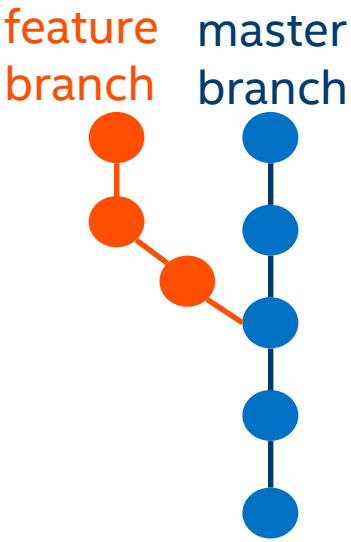
Problems:

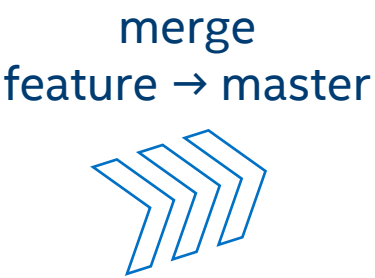
- Hard to compare between versions
- After 1 year most likely you will lose the progress (removed source code by mistake, broken storage)
- Team work is painful

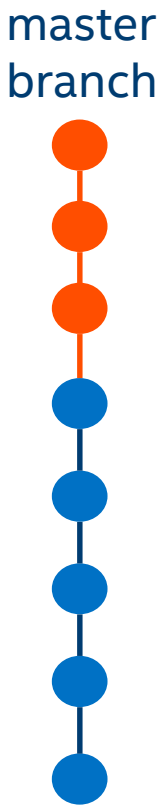
Version control systems

- git is the most popular VCS nowadays
- Key things:
  - commits
  - branches
  - repository

Version control systems (git)







commit

git

```
int main(int argc, char** argv)
{
    int a = 0;
    return 0;
}
```

```
git init
git checkout -b new_branch
```

```
#include <iostream>

int main(int argc, char** argv)
{
    std::cout << "Hello!" << std::endl;
    return 0;
}
```

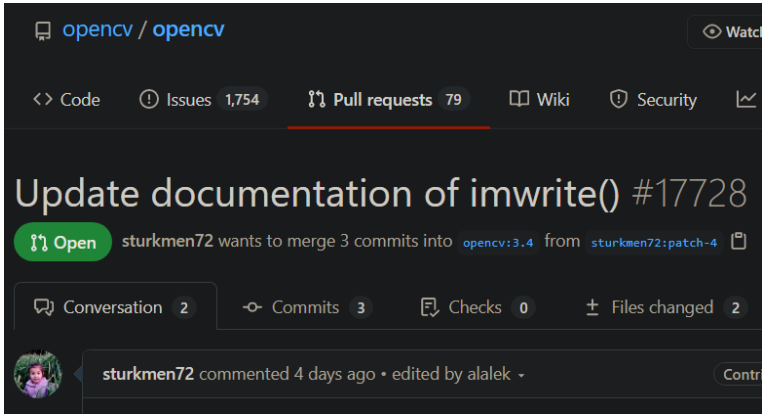
```
git add main.cpp
git commit -m "add print"
```

git

```
$ git diff 031f8e56e c86d94c53

--- a/main.cpp
+++ b/main.cpp
@@ -1,5 +1,7 @@
+#include <iostream>
+
 int main(int argc, char** argv)
 {
-    int a = 0;
+    std::cout << "Hello!" << std::endl;
     return 0;
 }
```

Remote repository

- Provide Pull Request process to merge branches: code review, discussion
- Online bug tracker, CI integration, documentation, analysis tools

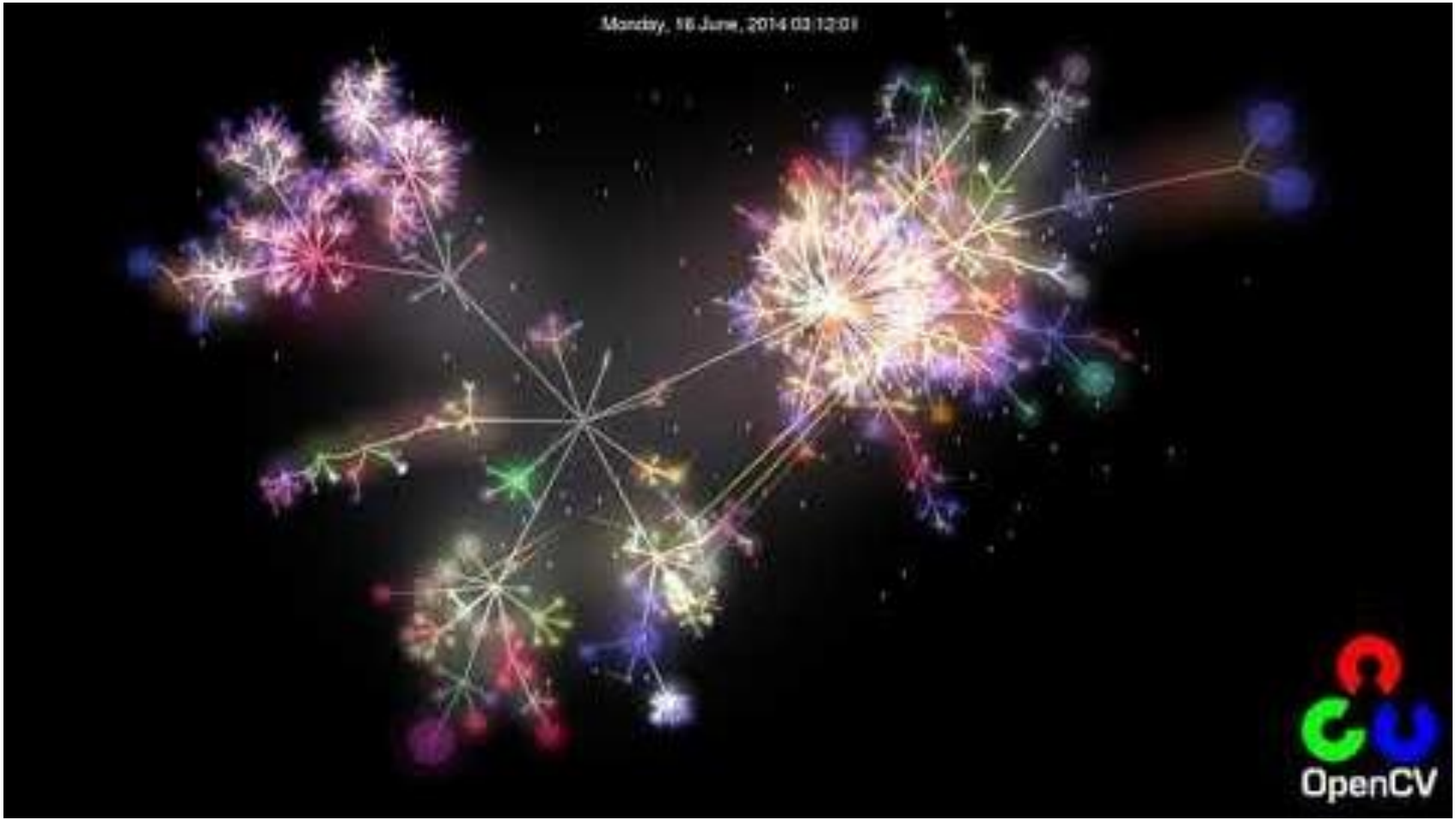


GitHub

GitLab

Bitbucket

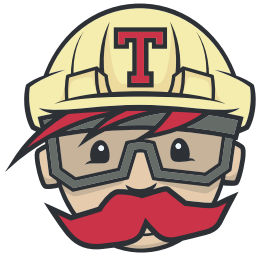
```
git pull origin master

git push fork faster_stronger
```



https://www.youtube.com/watch?v=fkVu36fidAM

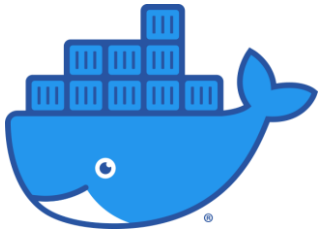
Contiguous integration

- Tests, coverage, distribution, services
- The heartbeat of your project



Travis-CI

Jenkins

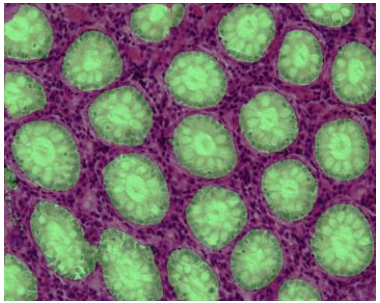


Docker

Issue-Label Bot

Summer Camp practice

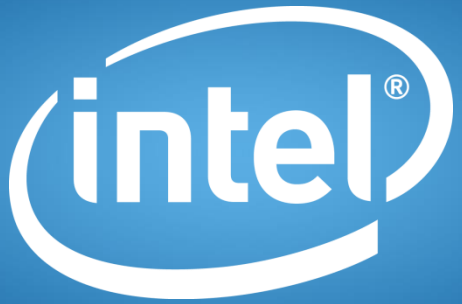
- Explore a dozen of practice tasks
- Every module relates to a corresponding lecture
- Study git, GitHub, Google Test, OpenVINO, OpenCV
- Solve and track your progress, collaborate and help others



Soon her eye fell on a little glass box that
was lying under the table: she opened it, and
found in it a very small cake, on which the
words “EAT ME” were beautifully marked in
currants. “Well, I’ll eat it,” said Alice, “ and if
it makes me grow larger, I can reach the key ;
and if it makes me grow smaller, I can creep
under the door; so either way I’ll get into the
garden, and I don’t care which happens !”

Q: Where Alice should go?
A: the garden

User name	0_git	1_opencv	2_mnist	3_classification	4_detection	6_segmentation	7_nlp	8_quantization	9_colorization	10_reinforcement_learning
TolyaTalamanov	accepted									
MariaMedvede	accepted		accepted	accepted	in progress	accepted				
dkurt										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