

## Awesome Resources:

### 1. Hello 2015:

- <http://codeforces.com/blog/entry/15473>
- <http://codeforces.com/gym/100571>
- <http://codeforces.com/gym/100570>
- Editorial: <http://codeforces.com/blog/entry/15722>

### 2. Segment Trees:

- <http://codeforces.com/blog/entry/15890>
- <http://codeforces.com/blog/entry/3327>
- <http://codeforces.com/blog/entry/12285>
- <http://codeforces.com/blog/entry/13703>
- <http://codeforces.com/blog/entry/13554>
- <https://www.quora.com/How-to-count-inversions-using-Segment-Tree-of-a-given-array>

### 3. Graph Algorithms: <http://codeforces.com/blog/entry/16221>

### 4. DS:

- <http://codeforces.com/blog/entry/15729>
- <http://codeforces.com/blog/entry/13959>
- <http://codeforces.com/blog/entry/3767>

### 5. List of algos: <http://codeforces.com/blog/entry/13529>

### 6. Policy Based DS: <http://codeforces.com/blog/entry/11080>

### 7. Policy Based DS 2: <http://codeforces.com/blog/entry/13279>

### 8. Ordered Set:

- <http://codeforces.com/blog/entry/11275>
- <http://codeforces.com/blog/entry/3781>

### 9. Fenwick Tree:

- [http://e-maxx.ru/algo/fenwick\\_tree](http://e-maxx.ru/algo/fenwick_tree)
- <http://codeforces.com/blog/entry/619>
- <http://petr-mitrichev.blogspot.com/2013/05/fenwick-tree-range-updates.html>
- <http://apps.topcoder.com/forums/?module=Thread&threadID=715842&start=0&mc=8#1407869>
- <http://apps.topcoder.com/forums/?module=Thread&threadID=756271&start=0&mc=2#1579597>
- <http://codeforces.com/blog/entry/13501>

### 10. Counting Inversions:

<http://pavelsimo.blogspot.co.uk/2012/09/counting-inversions-in-array-using-BIT.html>

### 11. Tries: <https://discuss.codechef.com/questions/15797/understanding-trie-and-its-applications>

### 12. C++ implementations: <https://codesea.wordpress.com/code-library/>

### 13. EMAXX: <http://e-maxx.ru/algo/>

### 14. Game of Nim <http://codeforces.com/blog/entry/3657>

15. HLD:

- <http://blog.anudeep2011.com/heavy-light-decomposition/>
- <http://codeforces.com/blog/entry/12239>
- [http://wcipeg.com/wiki/Heavy-light\\_decomposition](http://wcipeg.com/wiki/Heavy-light_decomposition)

16. Binary Search: <http://codeforces.com/blog/entry/9901>

17. DP:

- Bitmask DP: <http://codeforces.com/blog/entry/337>
- Bitmask DP: <http://www.ugrad.cs.ubc.ca/~cs490/sec202/notes/dp/DP%202.pdf>
- DP on Trees: <https://threads-iiith.quora.com/Dynamic-Programming-on-Trees-Tutorial>
- Optimization: <http://codeforces.com/blog/entry/8219>
- Types: <http://codeforces.com/blog/entry/325>

18. Sparse Table: <https://mayanknatani.wordpress.com/2013/07/15/range-minimum-query/>

19. Link/Cut Tree: <http://www.cs.cmu.edu/~avrim/451f12/lectures/lect1009-linkcut.txt>

20. Coordinate Compression: <https://www.quora.com/What-is-coordinate-compression>

21. Fractional Cascading:

- <http://blog.ezyang.com/2012/03/you-could-have-invented-fractional-cascading/>
- [http://e-maxx.ru/algo/segment\\_tree#18](http://e-maxx.ru/algo/segment_tree#18)
- [https://en.wikipedia.org/wiki/Fractional\\_cascading](https://en.wikipedia.org/wiki/Fractional_cascading)
- <http://cs.brown.edu/courses/cs252/misc/resources/lectures/pdf/notes08.pdf>
- A bit high level: <http://www.umiacs.umd.edu/~joseph/ffc-and-apps-tr.pdf>
- <http://www.hpl.hp.com/techreports/Compaq-DEC/SRC-RR-12.pdf>

22. K-Dimensional Tree:

- <http://www.geeksforgeeks.org/k-dimensional-tree/>
- <http://www.geeksforgeeks.org/k-dimensional-tree-set-2-find-minimum/>
- <http://www.geeksforgeeks.org/k-dimensional-tree-set-3-delete/>
- [https://www.cise.ufl.edu/class/cot5520fa09/CG\\_RangeKDtrees.pdf](https://www.cise.ufl.edu/class/cot5520fa09/CG_RangeKDtrees.pdf)

23. Range Trees (Prerequisite-KD Tree) :

- <http://blog.ezyang.com/2012/02/visualizing-range-trees/>
- [http://www.cse.wustl.edu/~taoju/cse546/lectures/Lecture21\\_rangequery\\_2d.pdf](http://www.cse.wustl.edu/~taoju/cse546/lectures/Lecture21_rangequery_2d.pdf)
- <http://www.cs.uu.nl/docs/vakken/ga/slides5b.pdf>

24. 2-SAT: <http://codeforces.com/blog/entry/16205>

25. Meet-in-the-middle:

<https://www.quora.com/What-is-meet-in-the-middle-algorithm-w-r-t-competitive-programming>

26. Good Website: <http://www.infoarena.ro/arhiva-educationala>

27. Treaps:

- <http://habrahabr.ru/post/101818/>
- <http://codeforces.com/blog/entry/3767>

28. Another Good Resource:

<http://halexv.blogspot.mx/2015/10/competitive-programming-resources.html>

29. Suffix Automaton: <https://drive.google.com/file/d/0B0BBPCmtPblcbVFsSG9qeTI1TjA/view>