

Essay in Advanced Algorithmics course (2019)

Choose and read a paper (**1 out of 8**), write a concise summary of this paper. You can read more about summarising research papers [here](#) or [here](#).

Make it exactly 2 pages - no exceptions! It can be 30 lines short, but not a single line longer...

Upload as a PDF only. No Word, RTF, etc.

Make absolutely clear in the abstract and text that it is **an overview of the published article(s)**, citing all relevant papers. *Add enough of relevant citations from the article (probably 3-5) to the most important other articles that are cited there.*

Add some illustration(s). They are worth thousands of words.

The essay has a **title**, **author** (you), author **affiliation** (Institute of Computer Science, University of Tartu, ...), **abstract**, **introduction**, **body** (with subsections), **conclusions and references**. Acknowledge your funding.

Use 2-column layout, this is much easier to read. I would **strongly recommend LaTeX styles**. They are nice, you do not need to worry about layout too much (although you may, if you want to procrastinate). And as programmers you are familiar with "compiling" code into end product. If you plan to use LaTeX, there are **very convenient online tools** like [overleaf](#) and [sharelatex](#), for which you don't have to install anything. You can just create a document online and even import the necessary layout (2-column) with minimal effort.

Avoid long sentences. Be concise. In the abstract there are usually no references; it has to be readable alone.

Citing: use numeric [2,3], author name (Kurzweil, 1979), or capitals [KTU76], [Kur76] styles. Citation is always **part of sentence**, not outside of it [2]. And usually sentence must be readable without citations as well. Not like: "In [1] new method was proposed", but rather "A new method was proposed [1], that ...".

Write to your peers. We will introduce a peer-review by co-students. **To be decided - how exactly...**

Choose one of the following articles: (2019)

(article PDF-s are here -

<https://drive.google.com/open?id=1ASgtOhnFqk2tP7y9XqLCVhLvMFKuUj7T>)

New 2019 articles:

01 - Patent: Fast multi-tier indexing supporting dynamic update

<https://patents.google.com/patent/US20160283538A1/en>

02 - Bloom filter based optimization scheme for massive data handling in IoT environment

<https://www.sciencedirect.com/science/article/pii/S0167739X17314516>

03 - Succinct Representation for (Non)Deterministic Finite Automata

<https://arxiv.org/abs/1907.09271>

04 - Zip Trees

https://link.springer.com/chapter/10.1007/978-3-030-24766-9_41

05 - Random Binary Search Trees for approximate nearest neighbour search in binary spaces

<https://www.sciencedirect.com/science/article/pii/S1568494619301553>

06 - Succinct Quadrees for Road Data

https://link.springer.com/chapter/10.1007/978-3-319-68474-1_18

07 - Inverted Linear Quadtree: Efficient Top K Spatial Keyword Search

<https://ieeexplore.ieee.org/abstract/document/7407420>

08 - Universal hashing

https://link.springer.com/chapter/10.1007/978-1-4842-4066-3_7