

AI in Compilers

Compilers are the part and parcel of every IT system in the world. These components convert high-level language to the machine-level language and provide optimized results. Artificial intelligence combined with machine learning and deep learning has enabled optimization patterns to be identified and produce the best output ratio. As discussed during the presentation tech giants such as Google and Facebook are making use of LLVM and Clang to run and support Chrome and Android Systems.

- Google seems to be satisfied with the AI Compiler researches. It has enabled more users to use Google for their advanced searches by 15-20%.
- Facebook uses AI to learn about its users and curate appropriate results in no time through compiler-level optimization.
- Out of the box ideas and faster deployments are made possible due to AI in the compiler.
- As described during the presentation, working with AI could be complex but it's easy if one knows ML and DL.

In my opinion, the usage of AI in Compilers has a long way to go because it does not at all cater to the privacy and ethics of the data. If Facebook can access and modify the data just like that, it is not secure at all. Building AI-assisted IDE's and NLP tools are a great boon but all the optimizations done in any hardware or software system could be purely defined as AI. It could just be a better implication of a data structure. AI-powered compilers are a novel idea and it opens the doors to further research in the domain.