



Przemysław Leśniak

Computer Science student



7 may 1994



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About me

I am a passionate Computer Science student from Poland that enjoys problem solving, programming and simply figuring out how things work. Currently on student exchange in Saarbruecken, Germany.

Skill

English



C++



Object Oriented Programming



git★5.0 Java★2.5 Python★3.0 C★4.0
Haskell★2.0 Coq★1.5 Assembly★2.0
Linux Command Line★3.0

(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

education

since 2017	M.Sc. Computer Science, one semester student exchange	Saarland University
since 2016	M.Sc. Computer Science	University of Wrocław
2013-2016	B.Sc. Computer Science: 4.5/5.0 <i>Virtual memory subsystem for mimiker operating system</i>	University of Wrocław

experience

2017	Google Summer of Code <i>Improving LLVM Backend for Chapel Compiler</i> Improved vectorization by fixing a serious bug and adding extra metadata in LLVM IR which in some cases improved performance of executed code by 400%.	Remote work
2016-2017	Nokia, C++ Software Engineer <i>TTCN-3 Compiler Project</i> - Greatly reduced number of memory allocations in compiled code using object pool-like design pattern inspired by slab allocator leading to 20% performance gain on average. - Reduced number of copy operations by introducing move operation in runtime and adding it to compiler code generation that resulted in 10% performance gain in some cases.	Wrocław
2015	Nokia, C++ Summer Trainee <i>Parsing library project</i> - Participated in library design inspired by Parsec library from Haskell language that was used to implement partial parser for TTCN-3 language. - Designed and implemented algorithm (based on pushdown automata) to locate changes in code in real time that would need to be re-parsed. - Integrated the algorithm and the parser into QtCreator to provide IDE functionality like auto-completion and jumping to function definitions.	Wrocław

project highlights

mimiker	University of Wrocław operating system Played a big role in virtual memory subsystem, mutex implementation, gdb scripting, ramdisk loading, basic filesystems. Helped other students get into the project.	C, MIPS assembly
quant	Lossy Image Compression Reduces image size by 80% while preserving good image quality. Optimized typically slow algorithm by using specially tuned data structures, parallelising parts of code and playing with compiler flags.	C++14
hCompiler	Compiler that compiles tiny subset of C Compiles directly to x86 assembly using syntax directed code generation. Supports working recursion and basic language constructs.	Haskell
GraphDrawer	Visual and real-time editing graph drawing program Rich in functionality: performs various algorithms on graph, saves graphs as images, draws pretty graph images.	Java
CubeSolver	Rubik's cube solving program Finds solution to physical rubik's cube and guides the user through it.	Python

other information

Hobbies: Popping, Speedcubing

Github: <https://github.com/coodie/>

CodeForces: <http://codeforces.com/profile/goovie>