

## EDUCATION

University of Wrocław, 2013 - now

Institute of Mathematics and Computer Science

**Degree course: Computer Science**

Estimated graduation year: July 2016 for Bachelor, July 2018 for Master's

Comprehensive secondary school No. V in Opole, 2010 - 2013

**Matemathics-Informatics-Physics profile**

## EXPERIENCE

**Nokia C++ Summer Trainee:** July - September 2015

### Responsibilities

- Implementation of parsing library in C++, inspired by Parsec from functional language Haskell.
- Implementation of parser for TTCN-3 language, using mentioned library

### Gained skills

- Git revision control system
- C++ programming: C++11, template metaprogramming, STL, boost
- Google test unit testing framework
- Programming tools such as: GNU make, linux, bash, cmake, gcc, clang
- SQLite

## SKILLS

### Programming languages and technologies

- **C++:** C++11, STL, templates, Google Test
- **Haskell:** monads, applicative functors, type classes, Parsec
- **Java:** Swing
- **Python:** university experience
- **Coq:** university experience

### Others

- Ability to use revision control system **Git**
- Strong problem solving, and analytical thinking abilities
- Good knowledge of algorithms and data structures and ability to implement them
- Good knowledge of functional and objective paradigm
- Medium knowledge about **Linux**, and ability to use it as programming platform
- Good knowledge of **english language** both written and spoken

## PROJECTS

### **hCompiler**

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

Simple compiler for subset of C. Written in Haskell, compiles directly to x86 assembly.

- Handles while loops, conditionals, recursive functions, nested arithmetic expressions
- Uses **GNU as** as back-end assembler and **gcc** to link
- Has it's own parser written in **Parsec**
- Extensive usage of monads, applicative functors and monad transformers

### **GraphDrawer**

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

Program for graph visualisation written in Java. Suited for competitive programming.

- Uses special algorithm to draw graph on plane and make it 'eye-pleasing'
- Can be used as real-time graph editor
- Has lots of options: saving graph to image, performing some algorithms on graph (for example: finding shortest paths)
- Uses **Model-View-Controller** design pattern and **Swing** as GUI

### **Other projects**

- MIPS assembler, written in Haskell
- Program for visualising curves such as Bezier Curve, written in Haskell
- Advanced sudoku game, written in Java
- mmap based malloc, written in C

## HOBBIES

- Programming contests
- **Speedcubing**
- **Popping** dance
- Electronic music

## OTHERS

Github's account <https://github.com/coodie/>

Codeforces's account <http://codeforces.com/profile/goovie>