Krzysztof Pszeniczny

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Education

University of Warsaw, Poland
Master's degree in Computer Science *2016 – 2018 (expected)*
specialisation: Cryptography

University of Warsaw, Poland
Bachelor's degree in Computer Science *2013 – 2016*
GPA: 4.99/5.00, class valedictorian, multiple additional elective CompSci courses, total credits: 280 ECTS out of 180 required

University of Warsaw, Poland
Bachelor's degree in Mathematics *2013 – 2017 (expected)*
advanced (honours) classes wherever possible, core GPA so far: 5.00/5.00, specialisation: Algebra

Work experience

Software Developer Intern
Jane Street Europe Ltd., London, UK and New York, NY, USA *2016-07 – 2016-09*
Developed internal tools and investigated garbage collection heuristics.

Software Developer Intern
Gemius S.A., Warsaw, Poland *2015-07 – 2015-09*
Improved and administrated an in-house resource-limiting cloud management system. Technologies used: Python, C++, Linux cgroups, MongoDB.

Selected university projects

- Monte-Carlo Markov chain simulation of chromatin movements under a modified 'Strings and Binders Switch' model developed for the Regulomics research group at the University of Warsaw. A year-long project written in advanced, state-of-the-art Haskell and C++ in a team of four, featuring custom domain specific language and data storage format. I was responsible for the most design choices and code written. Two orders of magnitude faster and three orders of magnitude more storage-efficient than the previous implementation. During development we encountered multiple compiler bugs. [github link].
- Advanced Topics in Operating Systems course: restoring processes from coredumps; a simple graphics device driver (successfully used model checking to reduce the number of bugs); extending Linux ext2 driver with a rudimentary copy-on-write support. [github link].
- An interpreter of a lazy, strongly and statically typed toy functional programming language with Hindley-Milner type inference, written in C# with a simple graphical user interface for Windows Phone. [github link]. Another interpreter, written for different course in advanced Haskell: [github link].
- A website showing train information and allowing users to record their journeys. A term-long project written in a team of three. I was responsible for the backend written in Scala and PostgreSQL. [live site link].
- A simple server/client measuring network latency using a variant of mDNS and DNS-SD for service discovery. Written in C. [github link]

Prizes and scholarships

2014 – 2016: Dean's list

2013 – 2015: Participant of the ACM-ICPC Regionals (CERC)

2012, 2015: Finalist of the Potyczki Algorytmiczne (Algorithmic Engagements) algorithmic competition

2013: Silver medal at the International Olympiad in Informatics; finalist of the Marathon 24 team programming competition; finalist of the Polish Mathematical Olympiad

2010 – 2013: Scholarship of the Ministry of Education

2012: Winner of the Baltic Olympiad in Informatics; member of the winning team in the Microsoft BubbleCup team programming competition; member of the Polish team in the Baltic Way team mathematical competition; gold medal at the Polish Olympiad in Informatics

2011: Winner of the Central European Olympiad in Informatics

Technical skills and interests

- Fluency in C, C++, Haskell and OCaml, intermediate knowledge of: Python and Scala.
- Other technologies: git, svn, hg, thrift, protocol buffers, MPI, SQL; Unix/POSIX/Linux, low-level and network programming. Formal verification and model checking: Coq, SPIN, NuSMV. Basics of x86 assembly.
- Advanced functional programming, compiler design, algorithms and data structures, cryptography.