

George Karpenkov

george@metaworld.me

programming languages experience

Proficient:

Java, Python

Confident:

JavaScript, C, PHP, C++

Some Experience:

Bash, OCaml, Haskell

technical skills

Databases

MySQL, Redis, MongoDB, Elastic Search

Build Automation

Make, ANT, Ivy, Maven

Tools

Linux, GIT, Vim, L^AT_EX, IntelliJ

interests

software engineering, designing safe and robust systems, formal methods, verification, logic, convex optimization, data mining

languages

English, Russian, French

references

available upon request

misc

 github.com/cheshire

- | | | |
|-------------|--|-----------------------------------|
| 2017 - Now | Apple, Cupertino, USA | Static Analysis Software Engineer |
| | Working on dynamic and static analysis tools. | |
| 2013 - 2017 | VERIMAG Laboratory, Grenoble, France | Contract PhD Student |
| | Developing methods for automated software verification and bug finding. Projects I work on include: | |
| | <ul style="list-style-type: none">• A software analysis plugin LPI which took the first place in the “Loops” sub-category of the international competition on software verification.• CPAChecker (cpachecker.sosy-lab.org), a collaboratively developed open-source tool for automated software verification and bug-finding.• Created JavaSMT (github.com/sosy-lab/java-smt) library, a unified API layer for accessing SMT (satisfiability modulo theories) solvers. | |
| 2012 - 2013 | Freelancer International Pty Ltd, Sydney, Australia | Software Engineer |
| | Backend development for the largest online global outsourcing marketplace. I have completed various projects including: | |
| | <ul style="list-style-type: none">• Designed, implemented and deployed responsive search system for the instant messaging application.• Did backend development, ranking algorithm, and schema design for the online directory of freelancers (http://freelancer.com/directory/).• Designed and implemented unified error handler across the main PHP website. | |
| 2012 - 2012 | University of Sydney | Casual Academic Staff |
| | Tutoring “Data Structures” and “Object Oriented Design” (basic of OO design, design patterns, and C++) courses. | |
| 2011 - 2011 | Google Australia, Sydney | Software Engineering Intern |
| | Completed a project involving optimization of the OCR stack and its integration into Google Docs. The result was pushed to production, and scanned PDFs uploaded to Google Docs became searchable. | |
| 2009 - 2012 | The Interaction Consortium, Australia, Sydney | Contract Software Engineer |
| | Web application development using Django framework, both backend and frontend. My main focus was writing libraries used across multiple websites, mainly for the backend administration panel. Participated in creating the websites for Museum of Contemporary Art, Art Gallery of New South Wales and many others. During my work I have contributed to various open source projects including: | |
| | <ul style="list-style-type: none">• Django ORM for MongoDB (http://github.com/django-nonrel/mongodb-engine).• A number of accepted patches to Django.• Smartlinks library: wiki-style links for Django models. Development, API and documentation (http://github.com/ixc/glamkit-smartlinks). | |

education

- 2013 - 2017 **VERIMAG Laboratory, Grenoble, France** PhD Student
Research in formal verification.
- 2008 - 2013 **The University of Sydney** Bachelor of IT (Hons. I), Bachelor of Science (Adv. Math)
Majored in computer science, mathematics and physics.

awards

- 2012 **1st place in Australia and New Zealand in ACM International Collegiate Programming Contest** Team Award
Biggest student programming competition in the world.
- 2008 **Microsoft Research Asia Prize for Junior Software Development Project**
Got awarded the prize for the work of developing the software for the remote-controlled helicopter.

publications

JavaSMT: A Unified Interface for SMT Solvers in Java

George Karpenkov, Karlheinz Friedberger, Dirk Beyer
VSTTE, 2016

Program Analysis with Local Policy Iteration

George Karpenkov, David Monniaux, Philipp Wendler
VMCAI, 2016

Software Verification with Local Policy Iteration (Competition Contribution)

George Karpenkov
TACAS, 2016

Formula Slicing: Inductive Invariants from Preconditions

George Karpenkov, David Monniaux
HVC, 2016

Creation of the database on a state of Saint Petersburg stone monuments by complex monitoring results.

Olga V. Frank-Kamenetskaya, Dmitrii Vlasov, Vera Egorova, George Karpenkov, Vera Rytikova
Studia Universitatis Babes-Bolyai, Geologia, 2009