



# Jarmo Isotalo

## Curriculum Vitae

### Education

2011 – **Bachelor of Computer Science**, *University of Helsinki*, Finland.  
Present

### Bachelor's Thesis (in progress)

Title *When and how developers search for help in programming*  
Supervisors Matti Luukkainen & Arto Vihavainen

### Experience

July/2015 – **Developer**, *Rage - Agile Education Research*, *Department of Computer Science*,  
Present University of Helsinki, Finland.

- During the summer I coordinated work of 7 other developers in Rage who were working on client and server side features of TestMyCode (see below). The 7 developers were split into two smaller teams and with each we did the full scrum cycle pushing new features out weekly.
- Continued where the two teams left off, Implemented email validation, course enrollment.
- General maintenance and made the hosting infrastructure and development pipeline more robust.
- Held a course with over twenty participants, in which students were to learn how to dive into bigger projects and fix bugs and implement new features. For the big project we used all projects of TestMyCode.

July 2014 – **Tech Intern**, GOOGLE, Zurich.

July 2015 I did my internship in the internal Google Telephony Team. In which I quickly became active and technically valued team member. During my internship I worked in a few different projects with different members of my team. Ideas for the two first two projects came out from my team members. However, I had the idea and my team wanted me to implement it. The projects included replacing an old proprietary system with one I built using internal technologies. The second one was building a system to route SIP calls from external sources to internal ones. Third project, was about a bigger initiative to build IVR with internal technologies, which would have allowed us to replace plenty of proprietary hardware. During my internship I also configured monitoring for all of these systems, had training sessions with support organization and on-call. All of the projects were implemented in Java using a wide variety of internal Google technologies.

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github.com/jamox • IRC: Jarmo (IRCnet and Freenode)

- 11/2013 – **Developer**, *Rage - Agile Education Research, Department of Computer Science*,  
Present University of Helsinki, Finland.
- Integrated checkstyle Java library for code quality checks to our TestMyCode product (see Open Source)
  - Created release procedure for updating material, used by multiple courses and implemented tools to make it easier and less error prone.
  - Implemented tools to generate diplomas for all participants of our MOOC courses.
  - Implemented tool to track progress of applicants from our MOOC course, including sign up for for interviews and for interviewers to leave feedback. Users were automatically authenticated by unique url mailed to each passing participant. Project: Project written with Rails 4.1. .
  - Extended my irc-bot to show test results from tmc-paste links to our support irc channel and link to exercise to make it easier to TA's to support students.
- 11/2013 – **Research Assistant**, *Rage - Agile Education Research, Department of Computer*  
7/2014 *Science* , University of Helsinki, Finland.
- Creation and maintenance of Massive Open Online Courses (MOOCs) at MOOC.fi
  - Helped on various smaller research projects.

1/2012 – **Teaching**, *Department of Computer Science*, University of Helsinki, Finland.

7/2014 I have worked on multiple courses as Teaching Assistant, Course Instructor and held multiple lectures as well been responsible for some MOOC courses:

- Creation and maintenance of Massive Open Online Courses (MOOCs) at MOOC.fi
  - Introduction to Programming, Advanced Programming, Spring 2012 - Summer 2014
    - Releasing and updating material and exercises, helping students on our IRC channel.
  - Data structures and Algorithms, Spring 2013 - Summer 2014
    - Releasing and updating exercises, helping students on our IRC channel.
- Creating updating and releasing programming exercises and coordination of a workshop for programming exercises
  - Introduction to Java Programming and Advanced Java Programming:
    - Fall 2012, Spring 2013, Summer 2013, Fall 2013, Spring 2014, Summer 2014
      - Coordinating work and working hours of 10-30 new students helping out in the workshop.
  - Data Structures and Algorithms
    - Fall 2012, Spring 2013, Fall 2013, Spring 2014
      - Coordinating work and working hours of 2-5 students helping out in the workshop.
- Course Instructor
  - Intermediate Studies Project: AI Odyssey (Department of Computer Science, University of Helsinki; Open University, University of Helsinki; Aalto University School of Business)
  - Introduction to Programming and Advanced Java Programming (Department of Computer Science, University of Helsinki)
  - Data Structures and Algorithms Programming Project (Department of Computer Science, University of Helsinki)
- Teaching Assistant
  - Introduction to Programming and Advanced Java Programming (Department of Computer Science, University of Helsinki)
  - Data Structures and Algorithms (Department of Computer Science, University of Helsinki)
  - Programming in C (Department of Computer Science, University of Helsinki)
- Lectures
  - Introduction to programming, Kick-off lecture, Summer 2014, Spring 2014, Summer 2013, Spring 2013 (Department of Computer Science, University of Helsinki)
  - Introduction to Programming, Kick-off lecture, Fall 2013, Aalto University School of Business
  - AI Odyssey, Kick-off lecture, Fall 2013, Department of Computer Science, University of Helsinki
  - C Programming, Kick-off lecture, Fall 2013, Department of Computer Science, University of Helsinki
  - Programming in C, Kick-off lecture (Department of Computer Science, University of Helsinki)

8/2013 – **Research Assistant**, *HIIT - Helsinki Institute for Information Technology HIIT*  
12/2013 *Department of Computer Science*, University of Helsinki, Finland.

Worked on a project building augmented reality shopping cart and conducted research in real supermarket with the shopping cart.

5/2013 – **IT support technician**, *Helsingin Energia*, Finland.

8/2013 Advanced help desk work, third level support, helped resolving organization wide issues, as well as tricky single user tickets. Work included also maintenance of infrastructure.

- 5/2012 – **IT support technician, Helsingin Energia, Finland.**
- 9/2012 Second and third level support support for windows 7 migration related tickets. Packaging various applications for users to install. Helped resolving multiple company wide issues.
- 3/2012 – **IT support technician, Helsingin Energia, Finland.**
- 4/2012 Second level support support for windows 7 migration related tickets.
- 12/2011 – **IT support technician, Helsingin Energia, Finland.**
- 1/2012 Second level support support for windows 7 migration related tickets. Worked on making the migration process easier.
- 5/2011 – **IT support technician, Helsingin Energia, Finland.**
- 9/2011 First and second level support support, helped resolving single user issues and some company wide. Work included also preparations for Windows Xp to Windows 7 migration.

## Open Source

Checkout my Github profile for more projects: [github.com/jamox](https://github.com/jamox)

- 2012 – **Developer and maintainer of TestMyCode (TMC).**
- Present Programming exercise assessment service. Used by thousands of students yearly.
  - The main components are:
    - The Server - Rails 4, some JavaScript for the front
    - The NetBeans plugin - Java
    - The User-mode Linux sandbox for running submissions
  - Some key achievements of mine:
    - Optimized refresh operation for course (check for new/changed exercises, generate new exercise templates etc.) from average of 10minutes to work in less than 10 sec even on courses with thousands of participants.
    - Added support for pastebin feature, making it much easier for students to share code with TA's to make it easier to provide help.
    - Email validation
    - Support for organizations - teachers and students in organizations

- Spring 2014 **Facebook Open Academy - Ruby On Rails.**  
Worked with the rails core team fixing bugs, developing new features and helping users facing issues with the Ruby On Rails Framework.

## Technical skills

### Programming

- Advanced JAVA, RUBY, HTML
- Intermediate JAVASCRIPT, CSS
- Good BASH, KVM, PYTHON, COFFEE SCRIPT, L<sup>A</sup>T<sub>E</sub>X
- Basics C
- Familiar RUBY ON RAILS, SINATRA, BACKBONE.JS, JQUERY, SOCKETIO, ANGULAR.JS frameworks
- Familiar POSTGRESQL, BIGTABLE, SQLITE, MYSQL, MONGODB databases

## Personal Information

Place of Birth **Helsinki, Finland**

Nationality **Finnish**

## Languages

Finnish **Native**

English **Full professional proficiency**

Swedish **Good**

Germany **Basics**

## Interests

- Sailing
- Skiing
- Programming
- Cooking
- Photography
- Tennis
- Computer security
- Travelling