

Yuriy Tymchuk

Research Assistant

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I'm a software engineer / computer scientist and a hacker in general who likes researching new ideas, developing impactful solutions, and teaching. Currently, my primary focus is software maintenance and evolution. I develop tools that assist software engineers in building healthy projects.

Achievements

QualityAssistant: My software-quality tool with a live feedback is integrated into the latest version of Pharo IDE. Expected usage: 30 commercial companies, 20 universities (for teaching).

Live 3D visualizations video [youtu.be/CuimMwuZiGA]: was used in a couple of dozen presentations for demonstrating the idea of live programming.

Employment

Universität Bern as *Research Assistant* Jan 2016 – Sep 2017 (expected)
Research on software quality and evolutionary monitoring. Maintenance of the group's git server. I've invented a 3D visualization that allows detection of defects in software quality evolution. Teaching.
Pharo Moose Roassal Python Ruby Java git

Ukrainian Catholic University as *Lecturer & Strategic Consultant* Jun 2015 – ongoing
Planning the first year for the bachelor computer science program and a long term strategy for the Faculty of Applied Sciences. Teaching advanced programming for the data science master students.

Università della Svizzera Italiana as *Doctoral Assistant* Oct 2013 – Dec 2015
Modeling of developer collaboration, based on the data mined from software repository. Research on code quality and code review, development of ViDI code review tool and QualityAssistant static analyzer. Teaching.
Pharo Moose Roassal Gephi Python Racket MongoDB

Innocode as *Software engineer* Apr 2013 – Sep 2013
Pre-project research concerning a leanbusiness.no web-application. Development of Relink project in Ruby on Rails. Increased performance of the team by introducing git-flow strategy.
Ruby on Rails JavaScript HTML/CSS git

RMoD, Inria as *Intern* Jan 2013 – Apr 2013
Research on AST metamodels. Development of FAST: a generic metamodel and symbol resolution algorithm.
Pharo Moose PetitParser

InterLogic as *Software engineer* Aug 2012 – Jan 2013
Development of a Java3D applet for ventilation system configuration with a backend in PHP and MySQL. I've developed a module in Scala which decreased the complexity by an order of magnitude in comparison with Java implementation.
Java Java3D Scala PHP MySQL

Unikernel Team (<i>freelance</i>) as <i>Founder/Leader</i>	<i>Mar 2010 – Aug 2012</i>
Different websites made from scratch. Usually online shops, sometimes web apps with rich frontend.	
<code>HTML/CSS</code> <code>PHP</code> <code>CakePHP</code> <code>JavaScript</code> <code>Raphaël JS</code> <code>MySQL</code>	
UARNet ISP as <i>Network Administrator</i>	<i>Feb 2009 – Jul 2012</i>
On call assistance, network administration, minor web development.	
<code>FreeBSD</code> <code>Linux</code> <code>iptables</code> <code>Oracle RDBMS</code> <code>PHP</code>	

Education

Ph.D. in Informatics (<i>ongoing</i>) @ <i>University of Lugano & University of Bern</i>	<i>2013 – 2017</i>
Thesis topic: "Treating Code Quality as a First Class Entity"	
Master of Science @ <i>Ivan Franko National University of Lviv</i>	<i>2012 – 2013</i>
Specialization in Informatics	
Bachelor of Science @ <i>Ivan Franko National University of Lviv</i>	<i>2008 – 2012</i>
Specialization in Informatics	
Highschool diploma @ <i>Lviv Physics and Mathematics Lyceum</i>	<i>2006 – 2008</i>
Specialization in Physics and Mathematics	
Member of MASU @ <i>Minor Academy of Sciences of Ukraine</i>	<i>2006 – 2008</i>
"Whimsical Bride" - the graduation research project about statistics theory	

Additional Training

Design Science & Design Thinking @ <i>CUSO Winter School</i>	<i>2017</i>
Hands-on Data Analysis with R @ <i>CUSO Seminar</i>	<i>2016</i>
Taming Big Data @ <i>CUSO Winter School</i>	<i>2016</i>
Search-Based Software Engineering @ <i>International Summer School on Software Eng.</i>	<i>2014</i>

Publications

- conferences.....
- CuboidMatrix: Exploring Dynamic Structural Connections in Software Components using Space-Time Cube**, *T. Schneider, Y. Tymchuk, R. Salgado, and A. Bergel*, In Proceedings of VISSOFT'16 (4th IEEE Working Conference on Software Visualization), IEEE, 2016.
- Walls, Pillars and Beams: A 3D Decomposition of Quality Anomalies**, *Y. Tymchuk, L. Merino, M. Ghafari, and O. Nierstrasz*, In Proceedings of VISSOFT'16 (4th IEEE Working Conference on Software Visualization), pp. 126–135, IEEE, 2016.
- Code Review: Veni, ViDI, Vici**, *Y. Tymchuk, A. Mocci, and M. Lanza*, In Proceedings of SANER'15 (22nd International Conference on Software Analysis, Evolution, and Reengineering), pp. 151–160, IEEE, 2015.
- Collaboration in Open-source Projects: Myth or Reality?**, *Y. Tymchuk, A. Mocci, and M. Lanza*, In Proceedings of MSR'14 (11th Working Conference on Mining Software Repositories), pp. 304–307, ACM, 2014.

formal demonstrations.....

ViDI: The Visual Design Inspector, Y. Tymchuk, A. Mocci, and M. Lanza, In Proceedings of ICSE'15 (37th IEEE/ACM International Conference on Software Engineering), pp. 653–656, IEEE Press, 2015.

doctoral symposium.....

Treating Software Quality as a First-Class Entity, Y. Tymchuk, In Proceedings of ICSME'15 (31st International Conference on Software Maintenance and Evolution), pp. 594–597, IEEE, 2015.

workshops.....

When QualityAssistant Meets Pharo: Enforced Code Critiques Motivate More Valuable Rules, Y. Tymchuk, M. Ghafari, and O. Nierstrasz, In Proceedings of IWST'16 (International Workshop on Smalltalk Technologies), 2016.

What if Clippy Would Criticize Your Code?, Y. Tymchuk, In Proceedings of BENEVOL'15 (14th edition of the Belgian-Netherlands software evoLution seminar), 2015.

Generic Name Resolution with Metamodels, Y. Tymchuk, B. Arezki, A. Etien, N. Anquetil, and S. Ducasse, In Proceedings of BENEVOL'13 (12th edition of the Belgian-Netherlands software evoLution seminar), 2013.

theses.....

Extending FAMIX metamodel to generate ASTs for Java and Smalltalk applications (Mater's thesis), Y. Tymchuk, Ivan Franko National University of Lviv, Ukraine, 2013.

Teaching

Ukrainian Catholic University as *Lecturer*

Advanced Programming Fall 2016

Universität Bern as *Teaching Assistant*

Compiler Construction Spring 2017

Software Modeling and Analysis Fall 2016

Università della Svizzera Italiana as *Teaching Assistant*

Bachelors Project Spring 2015

Programming Fundamentals I Fall 2014, Fall 2015

Software Atelier IV Spring 2014

Service

Program Committee IWST 2017

9th International Workshop on Smalltalk Technologies

Program Committee - NIER and Tool Tracks VISSOFT 2017

5th IEEE Working Conference on Software Visualization

Organization Admin & Student's Mentor GSOC 2017

Pharo Consortium participation in the Google Summer of Code

Program Committee - Poster & Demo Track ICTERI 2017

13th Int. Conference on ICT in Education, Research and Industrial Applications

Program Committee - NIER and Tool Tracks	<i>VISSOFT 2016</i>
<i>4th IEEE Working Conference on Software Visualization</i>	
Artifact Evaluation Committee	<i>VISSOFT 2015</i>
<i>3rd IEEE Working Conference on Software Visualization</i>	
Student's Mentor	<i>GSoC 2013</i>
<i>ESUG participation in the Google Summer of Code</i>	

Personal Information

Date of Birth: Aug 11, 1991 **Marital Status:** Married
Place of Birth: Lviv, Ukraine **Nº of children:** 1
Citizenship: Ukrainian

Languages

English: Proficient **Polish (spoken):** Intermediate
Ukrainian: Native Speaker **Russian (spoken):** Intermediate
Italian: Basic

Hobby

Hiking picturesque or difficult mountains and reflecting amazing moments of this world with my camera (https://500px.com/yuriy_tymchuk). Few years ago I was still doing Kyokushinkai karate which allowed me to train my body as hard as I trainin my mind.

Remarks for Nerds

This cv is written in \LaTeX , versioned with git, hosted on GitHub and built with Travis CI