Alexey Zagalsky

Curriculum Vitae

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*"If you're not failing on a regular basis,
you're just not trying hard enough."*

Overview

I'm a software engineering researcher who's keen on startups, UX, and entrepreneurship. I conduct qualitative and quantitative research aiming to understand how software is built, what role does media play in software development (including the intricacies of the mechanisms involved), and the behaviors and motivations of software development communities and their members.

Education

2013–Present   **Ph.D.**, *Computer Science*, University of Victoria, Victoria, Canada.
Thesis topic: Knowledge building in software developer communities

2009–2013   **M.Sc.**, *Computer Science*, Tel-Aviv University, Tel-Aviv, Israel.
Thesis topic: Investigating opportunistic software development using a social media recommendation system

2004–2009   **B.Sc.**, *Computer Science*, Tel-Aviv University, Tel-Aviv, Israel.

Professional Experience

2013–Present   **Software Engineering Researcher**, *Computer Human Interaction & Software Engineering Lab (CHISEL)*, University of Victoria, Canada.
PhD student conducting research in software engineering, focusing on the interplay between developers, tools, their activities, and how it affects collaboration and communication. My research formed a theory of distributed knowledge building and sharing in software developer communities–allowing for an understanding of *how software is built* and *why* certain tools and features are adopted over others.
  ○ Led and conducted qualitative, quantitative, and mixed-method research: ethnographic studies, case studies, interviews, surveys, focus groups, and data mining methods
  ○ Collaborated with experts and international researchers
  ○ Communicated our research through academic papers, blog posts, and by giving talks
  ○ Mentored, managed, and supervised other graduate students in their research

2009–2013   **Software Engineering Researcher**, Tel-Aviv University, Israel.
As part of my M.Sc. degree, I designed and developed a code recommendation prototype tool (http://exampleoverflow.net) that uses questions and answers from Stack Overflow to help developers find and use high quality existing code snippets. By conducting user observations and interviews, I've investigated opportunistic software development through the use of code examples.
  ○ This research project involved data mining of large data sets, web development, search algorithms, human-computer interaction design, and more
  ○ Research methods: a survey, interviews, lab experiments, and observations
  ○ Technologies: Java, jQuery, SQL, CSS, HTML, and Google App Engine

Languages

Hebrew, *Native language*.

English, *Fluent in written and spoken English*.

Russian, *Fluent in spoken Russian*.

Professional Activities

Teaching

2014–2016 **Sessional Lecturer**, *Startup Programming*, University of Victoria, Canada.
(2 semesters) Designed, lobbied for, and introduced a new course. I recruited exceptional local industry mentors to work closely with the student teams. In this course, students gained the skills needed to transform innovative ideas into working software projects utilizing advanced mobile, cloud, social, and web technologies–mastering human-centered design. The course has been a tremendous success. Graduated students used their experience from the course to secure awesome jobs in companies such as Amazon, Microsoft, and local startups; The course has been featured on the GitHub education blog; And, the course has been adopted by a colleague and is now offered at CMU;
Topics included:
- Web and mobile development
- UI/UX design, design thinking
- Testing for web developers
- DevOps

Spring 2016 **Teaching Assistant**, *Human Computer Interaction*, University of Victoria, Canada.
This course provided a comprehensive introduction to the field of human computer interaction (HCI) and interaction design (IxD). It focused on the design and evaluation of usable computer interfaces. As part of the course, we covered:
- Development of scenarios, use cases, and personas
- Low and high fidelity prototyping with tools such as Balsamiq, Sketch, and InVision
- Cognitive walkthroughs, heuristic evaluation, and user studies
- Mobile design and multi-device experience
- Metrics and user retention

2010–2013 **Teaching Assistant**, *Google Technologies for Cloud and Web Development*, Tel-Aviv University,
(6 semesters) Israel.
Students acquired the tools and skills to rapidly develop innovative ideas into working projects utilizing advanced mobile, social, cloud, and web technologies (this was an earlier version of the Startup Programming course).

2011–2012 **Teaching Assistant**, *Google Technologies for Cloud and Web Development*, Bar-Ilan University, Israel.

2011–2012 **Teaching Assistant**, *Software 1 using Java*, Tel-Aviv University, Israel.
(2 semesters) The course introduced object-oriented programming methodology and the Java programming language. The course also dealt with theoretical and fundamental aspects of object-oriented programming.

Spring 2011 **Teaching Assistant**, *Web Application Security*, Tel-Aviv University, Israel.
This course introduced students to network and infrastructure threats and how to mitigate them using firewalls, network and host intrusion detection systems, and other OS based countermeasures. In addition, in this course we discussed security aspects that are unique to Web applications.

Community Service

Contributed to the software engineering research community through volunteering, fulfilling organizational roles, and peer-reviewing at premier software engineering conferences and journals.
- Created and co-organized a research seminar focusing on advanced topics in software engineering, University of Victoria, Canada, 2016–2017
- Served as a program committee member of the *NIER and Tools* track at VisSoft 2017, and a program committee member at VisSoft 2016
- Reviewed journal manuscripts for: TOSEM, EMSE, JSS, PLOS ONE, and IEEE Software magazine. Additionally, reviewed conference papers for: CSCW 2018, CSCW 2017, CHI 2016, MSR 2016, and FSE 2016 conferences
- Served as a CSD 2015 workshop session chair, an ICSE 2015 workshop
- Served as part of a judging panel at University of Victoria's 2015 elevator pitch competition
- Served as a student volunteer at the ICSE 2015 conference

▬▬ Development Tools and Languages

Languages   *Java, Python, HTML, CSS, LaTex, JavaScript, R, Go, C++*

Tools   *Git/GitHub, Balsamiq, InVision, Heroku, Visual Studio Code, Eclipse, RStudio, RQDA, Insomnia REST client*

DB   *SQLite, MongoDB*

▬▬ Selected Code Projects

2018   **AI Snake developed for the BattleSnake programming competition**.
Technologies: Go, Heroku, Docker
Source code: https://github.com/alexeyza/chiseler-snake

2013   **Predicting Stack Overflow tags, given only the question text and its title**.
Technologies: Python, MongoDB
Source code: https://github.com/alexeyza/Kaggle-Facebook3

2010   **A Ray Tracer implemented in Java**.
Technologies: Java, SWT
Source code: https://github.com/alexeyza/raytracer

2009   **Virtual USB Ethernet adapter for LPC2148**.
Technologies: Python, Tkinter
Source code: https://github.com/alexeyza/lpc2148

▬▬ Selected Publications

A complete list of publications can be viewed at: scholar.google.ca/citations?user=WWYRn7AAAAAJ

2017   **How the R Community Creates and Curates Knowledge: An Extended Study of Stack Overflow and Mailing Lists**, *Alexey Zagalsky, Daniel M. German, Margaret-Anne Storey, Carlos Gómez Teshima, Germán Poo-Caamaño*.
Journal of Empirical Software Engineering (EMSE), 2017, Springer

2017   **How Social and Communication Channels Shape and Challenge a Participatory Culture in Software Development**, *Margaret-Anne Storey, Alexey Zagalsky, Fernando Figueira Filho, Leif Singer, and Daniel M. German*.
Transactions on Software Engineering (TSE) journal, 2016, IEEE

2016   **Disrupting Developer Productivity One Bot at a Time**, *Margaret-Anne Storey and Alexey Zagalsky*.
In Visions and Reflections track of the 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE), 2016, ACM

2015   **The Emergence of GitHub as a Collaborative Platform for Education**, *Alexey Zagalsky, Joseph Feliciano, Margaret-Anne Storey, Yiyun Zhao, and Weiliang Wang*.
18th ACM conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2015, ACM

▬▬ Awards and Honors

2017   University of Victoria Graduate Award

2016   University of Victoria Graduate Award

2014   University of Victoria Graduate Fellowship

2013   University of Victoria Graduate Fellowship

2011   Award for Academic Excellence and Achievement, Tel-Aviv University