



Sofia Reis

PHD STUDENT · SOFTWARE ENGINEER

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I love to learn new things and challenge myself every day. I aim to improve people's lives with my work/research. I am mainly interested in Security, Testing, Static Analysis, Data Mining and Deep Learning.

Education

Instituto Superior Técnico, University of Lisbon (IST)

Lisbon, Portugal

PH.D. IN COMPUTER SCIENCE AND ENGINEERING

Feb. 2018 - NOW

- **Supervisor** Prof. Rui Maranhão

Leiden Institute of Advanced Computer Science, Leiden University (LIACS)

Leiden, The Netherlands

M.Sc. IN COMPUTER SCIENCE, ERASMUS+ PROGRAMME

Sep. 2016 - Feb. 2017

- **Courses** Databases and Data Mining, Evolutionary Algorithms, Social Network Analysis and Testing Object Oriented Software. I also attended Multimedia Systems even though not included in my studies plan.

Faculty of Engineering, University of Porto (FEUP)

Porto, Portugal

MASTER'S DEGREE IN INFORMATICS AND COMPUTING ENGINEERING

Sep. 2012 - Sep. 2017

- **Thesis** Assessing Software Vulnerabilities Using Naturally Occurring Defects, **Grade** 19/20 (top 5%)

Professional Experience

KPMG PT

Porto, Portugal

ROBOTIC PROCESS AUTOMATION DEVELOPER, ARTIFICIAL INTELLIGENCE

Sep 2017 - Mar 2018

- Responsible for designing and delivering automations in Automation Anywhere for VAT processes in the pharmaceutical sector. Automation Anywhere Certified Developer. License AAADVC-Fv5QqG1JID

Research Experience

Assessing Software Vulnerabilities Using Naturally Occurring Defects

MASTER THESIS DEVELOPED AT FEUP

Feb. 2017 - Jul. 2017

- Static analysis tools' (SATs) study using real vulnerability test cases since mutations might differ inadvertently from actual defects. The goal was to prove that researchers can collect a substantial amount of samples from a source code hosting website and use them to identify problems in the SATs. Thus, we can determine the tools that perform better and help companies choose the right ones to integrate their CI/CD pipeline. Technologies: Python, Redis, JavaScript (D3.js), Google Cloud, GitHub API. Available at sofiaoreis.github.io/docs/thesis.pdf

"Diário da República" Project

RESEARCHER AT INESC-ID IN LISBON

Apr. 2018 - NOW

- "Diário da República" is a search engine provided by the Portuguese government to citizens consult all the information regarding the Portuguese laws. This project aims to evaluate the performance of the search engine concerning its information retrieval capabilities. <https://dre.pt/>

Publications (3)

JOURNAL

- Reis, S., & Abreu, R. (2017).** A Database of Existing Vulnerabilities to Enable Controlled Testing Studies. International Journal of Secure Software Engineering (IJSSE), 8(3), 1-23. doi:10.4018/IJSSE.2017070101
2017 Special issue invitation. Manuscript published.

CONFERENCES

- 2017 **Reis, S., & Abreu, R. (2017). SECBENCH: A Database of Real Security Vulnerabilities.** In Proceedings of the International Workshop on Secure Software Engineering in DevOps and Agile Development, SecSE 2017 (pp. 70-85). Co-located with the 22nd European Symposium on Research in Computer Security (ESORICS 2017). <http://ceur-ws.org/Vol-1977/> *Oslo, Norway*
- 2017 **Reis, S., & Abreu, R. (2017). Using Github to Create a Dataset of Natural Occurring Vulnerabilities.** In Proceedings of the 28th International Workshop on Principles of Diagnosis (DX'17). Poster Session. <https://easychair.org/publications/volume/DX17/preface> *Brescia, Italy*

Communication Skills

PhD OpenDays 2018 - Instituto Superior Técnico

Lisboa, Portugal

PRESENTER FOR LEVERAGING KNOWN VULNERABILITIES TO MODERNIZE STATIC ANALYSIS TOOLS

Mar. 2018

- Poster session where I presented the main idea of my PhD and the research goals for the next year.

28th International Workshop on Principles of Diagnosis, DX'17

Brescia, Italy

PRESENTER FOR USING GITHUB TO CREATE A DATASET OF NATURAL OCCURRING VULNERABILITIES

Sep. 2017

- The abstract of *Using Github to Create a Dataset of Natural Occurring Vulnerabilities* was accepted to a poster session where I presented my research work for three hours. sofiaoreis.github.io/docs/dx17_poster.pdf

Semana Profissão Engenheiro (SPE)

Porto, Portugal

COURSE PROJECT PRESENTATION

Mar. 2016 - Apr. 2016

- Presentation of Database and Web Applications Laboratory final project during a week where FEUP celebrates engineers. We also presented it to a high school when they visited us to see the kind of work we do over the years. Only the best projects are invited to this event.

Skills

Programming	Python, C/C++, JAVA, JavaScript, Matlab, Ruby, TypeScript, Ruby, LaTeX, HTML5, CSS, UML, PHP
Web	Ruby on Rails, NodeJS, AJAX, jQuery, Bootstrap, AngularJS, Express
Mobile	Android, Ionic 2, Xamarin
Data Mining & Visualization	D3.js, scikit, pandas, graph-tool, gephi, weka
SQL/NOSQL DBMS	Redis, MySQL, PostgreSQL, Access, SQLite3, MonetDB
Languages	Portuguese (Native), English (Advanced), French (Basic)

Extracurricular

Students Union AEFEUP - FEUP

Porto, Portugal

IMAGE DEPARTMENT HEAD (1 YEAR) AND IMAGE DEPARTMENT COLLABORATOR (2 YEARS)

Jun. 2014 - May 2017

- Member of the students union for three years. In the first two years, I learned how to produce quality graphic material to advertise AEFEUP events and photographed many events. I gained strong skills in Photoshop, Adobe Illustrator, InDesign and Lightroom. In my final year, I lead a group of more than ten elements (image staff) and helped them with their designs production (providing feedback, tutorials, material and inspiration);

JuniFEUP - FEUP

Porto, Portugal

FRONT-END PROGRAMMER

Mar. 2015 - Sep. 2016

- I solidified my notions of web design and learned how to develop beautiful and intuitive web applications. I was involved in two different projects: JuniCV and JuniFEUP's website.

Administrative Experience

Make or Break

Porto, Portugal

MEMBER OF THE COMMUNICATION DEPARTMENT

Jan. 2018 - Apr. 2018

- Make or Break is a 3-day tech fest with prizes, workshops, gadgets, food, and more. I was invited to help on the event's communication. <https://makeorbreak.io/>

Commit Porto

Porto, Portugal

CORE MEMBER OF THE EVENT'S ORGANIZATION, ALUMNI EI EVENT

Sep. 2017 - NOW

- Commit Porto is a tech conference that brings together professionals who tackle challenges in software development with the latest technologies. <http://commitporto.com/>

JobIT

Porto, Portugal

CORE MEMBER OF THE EVENT'S ORGANIZATION

Nov. 2016 - NOW

- JobIT is a 3 days event where several companies (e.g., Google, Microsoft, Feedzai) are invited to present themselves to MIEIC's finalists. It is a way to break the barrier between the academic and the business world and help finalists increase their network.
- In the 2017 edition, I was co-responsible for several parts of the event, such as inviting and hosting companies, designing all the graphic material (logo, posters, all the advertising material), marketing and website (<http://jobit.pt/>). In the 2018 edition, I am mainly managing and supervising the event's team.

Collaborator/Volunteer

Coursera Translator

VOLUNTEER

Nov. 2017 - NOW

- Since the majority of coursera courses teach complex subjects using specific terms and words, I decided to apply as a translator to increase the number of subjects taught in Portuguese and thus decrease the barriers of learning such topics.

Talk a Bit 17

Porto, Portugal

VOLUNTEER

Fev. 2017

- I helped the core organization making gift bags, taking photos and welcoming attendees to the event (check-in).

Alumni EI FEUP

Porto, Portugal

COLLABORATOR, NON-PROFIT

Nov. 2016 - NOW

- I was one of the core collaborators of JobIT'17 where the association invites a group of finalists to organize the event. Currently, I help the organization with communication, events and projects such as the students mentorship program.