DSQA'20: 2nd International Workshop of Data-driven System Quality Assurance

Barry Boehm
CS Department
USC
Los Angeles, CA USA
boehm@usc.edu

Xavier Franch
ESSI Department
Universitat Politècnica de Catalunya
Barcelona, Spain
franch@essi.upc.edu

I. Description

The increasing availability of astonishing volumes of heterogeneous data when developing and using current IT systems is opening the way to advanced techniques in many fields of system engineering. Quality assurance is not an exception to this rule. The exploitation of this data may provide to all type of stakeholders (from developers to CEOs) evidence about the current behavior of the system, and empower them as to make informed decisions in their daily work.

However, data-driven quality assurance is not for free. Data is often incomplete, unreliable and available in highly heterogeneous forms. Aggregating the data into meaningful quality factors is not always evident, and may highly depend on a particular context, making generalization hard. Big data technologies are required, with the inherent problems of managing such demanding infrastructure. All in all, data-driven system quality assurance is today a challenge.

The DSQA workshop has the goal of exploring the potential of data-driven system quality assurance while understanding and pointing out possible (or proved) solutions to these challenges. Last advancements in research and current state of the practice will be put together in order to better comprehend the potential of this emerging field.

II. Topics

The list of topics includes, but is not limited to:

- Mining software repositories for quality assurance
- Mining usage logs for quality assurance
- Big-data issues for data-driven quality assurance
- System quality prediction
- Legal (e.g. GDPR) and ethical issues with data-driven techniques
- Big-data based architectures for data-driven quality assurance
- Data-driven discovery of system quality interactions
- Impact of system qualities and their trade-off analysis on strategic decision-making processes
- Visualization of system quality

III. Submission

Authors are invited to submit original, unpublished papers. Simultaneous submissions to other publications and conferences are not permitted. Detailed instructions for electronic paper submission, panel proposals and review process can be found at https://qrs20.techconf.org/submission.

Types of submissions are:

- Scientific papers (up to 8 pages). Describing novel research work. Evaluated in terms of originality, methodology, soundness and evaluation.
- Industrial papers and experience reports (up to 8 pages). Describing the application of DSQA techniques in real-world settings. Evaluated in terms of impact and lessons learned.
- Vision papers (up to 4 pages). Describing a position towards some area of DSQA. Evaluated in terms of feasibility of the vision and research agenda.
- Emerging results (up to 4 pages). Similar to scientific papers but without the need of evaluation (although preliminary evaluation would be welcome).
- Tool demos (up to 2 pages). Reporting on a particular tool in the topic. Evaluated in terms of maturity, availability and adequacy to the topic.

The above lengths include the title of the paper, the name and affiliation of each author, a 150-word abstract, and up to 6 keywords.

Authors must follow the IEEE Computer Society Press Proceedings Author Guidelines to prepare papers. At least one of the authors of each accepted paper is required to pay full registration fee and present the paper at the workshop. The submissions must be in PDF and uploaded to the conference submission site.

IV. Program Committee Members

Juan P. Carvallo, University of Azuay & CEDIA, Ecuador
Celia Chen, Occidental College, USA
Carlos H. Duarte, Brazilian Development Bank, Brazil
Lidia López, Universitat Politècnica de Catalunya, Spain
Silverio Martínez Fernández, Frauhofer-IESE, Germany
Jordi Marco, Universitat Politècnica de Catalunya, Spain