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Automatic software testing by using AI

PhD. Julio C. Estrada

Centro de Investigación en Matemáticas

Functionize Inc.

Abstract

Web applications are dynamic by nature meaning that its DOM is not constant over time executions. The way web-elements are described in DOM, such as they attributes, change over time. This is the main reason why unit tests scripts fails and we have to invest resources to maintaining them and keeping them up to date. Over time, maintaining unit tests becomes more expensive than actually resolving issues of the application under test. This is why having robust methods for testing applications is really important is this industry. So we have implemented a neural network model that we call the selection model as a robust method to identify the correct elements where actions of the TC ere executed, allowing us toto run TC successfully with out human intervention.

In this talk, we are going to show the basic concepts and approach used to automatise the software testing and and how AI helped to to develop the tools of the future for software testing in industry.

Biography

Julio Estrada is research professor at the Centro de Investigación en Matemáticas (CIMAT). He is engineer in computer systems, master in computer sciences and doctor in optics sciences. After his doctorate he made a one year postdoc stance as visiting scientist in the Massachusetts Institute of Technology (MIT). His research interests include computer vision, machine learning, signal processing and interogram analysis. He is part of the group of numerical methods and intelligence in CIMAT, which develops numerical algorithms for simulation of dynamic systems and differential equations using finite elements. As well, he collaborates in areas of signal processing and compressing sensing. Has collaborations with the Centro de Investigaciones en Optica (CIO) and the MIT. Other interests are in the industry sector, where he develops projects for companies like BADER and SRG in its Mexico facilities. As a consultant, he works with the Functionize company in the area of machine learning and artifitial intelligence.

Interests:

- Artificial Intelligence,
- Computer Vision,
- Signal Processing,
- Numerical Methods,
- Audio processing.