SEGarage: A Curated Archive for Software Engineering Research Tools

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ABSTRACT

SEGarage is a curated archive for software engineering tools developed through software engineering research. This service aims to ease the effort of finding and downloading tools from past research.

Categories and Subject Descriptors

Software and its engineering~Software notations and tools

General Terms

Keywords

Archive of tools, App Store.

1. INTRODUCTION

SEGarage is a curated archive for software engineering tools developed through software engineering research. This service aims to ease the effort of finding and downloading tools from past research. The benefits of such an archive are manifold:

1. The tools will be archived with backups at a central location and tools will be available at least for the foreseeable future. If the tools are already archived in a place like Zenodo, then we will just link to the remote resource.
2. Tools can be searched based on the area in SE. If someone wants to say get all Testing tools, then they could easily get all the tools in one place.
3. Since the entire archive will be only SE related tools, any practitioner could use this as a one-stop shop to see what the current state of the art in SE tools are. This potentially increases our impact on practice

2. WHAT HAS BEEN DONE

We have developed a website that enables easy uploading and viewing of tools. Researchers can upload their tool, a short description, contacts, keywords and links to relevant data. Once uploaded, viewers can easily search for tools based on keywords, conference, date, author name etc. or view tools categorized by area of research. Towards this end, we have developed a robust backend using S3, that can store large tools (in the 10s of GBs) including VMs and Docker images. We have curated around 250 tools from the last 5 years of ICSE (Main track and Demo track) as seed data for initial launch and have currently uploaded around 30 for initial testing. The goal is to manually curate it for the first few years and once established we expect authors to submit tools later on. We have partnered with ACM SIGSOFT to get some funding to support one undergrad student who shall crawl and collect hundreds of SE research related tools.

We will continue collecting the data and partner with conferences and journals so that we can add the curated tools to the archive. We will also report semi-annually on how many tools we added, and how many people looked for tools in our service. Some screenshots of our tool are below.

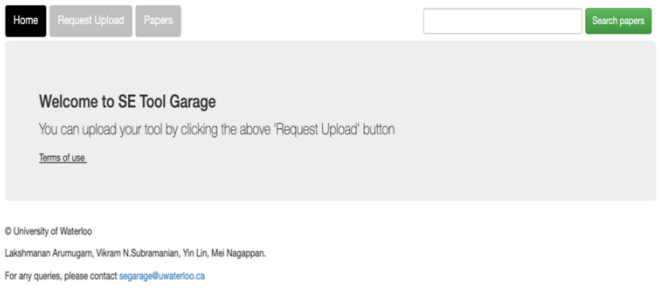

Figure 1. Home Page of SEGarage

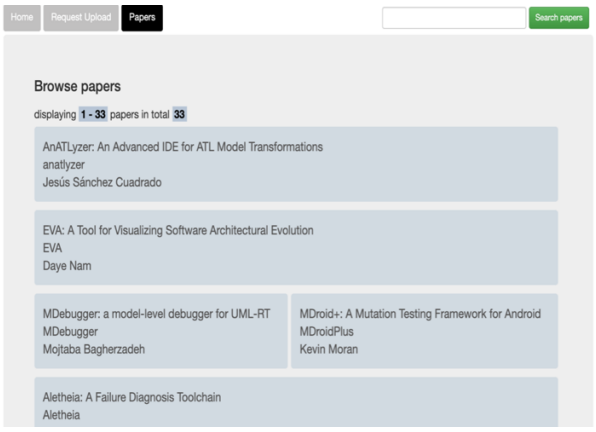

Figure 2. Archived Tool Collection

3. ACKNOWLEDGMENTS

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