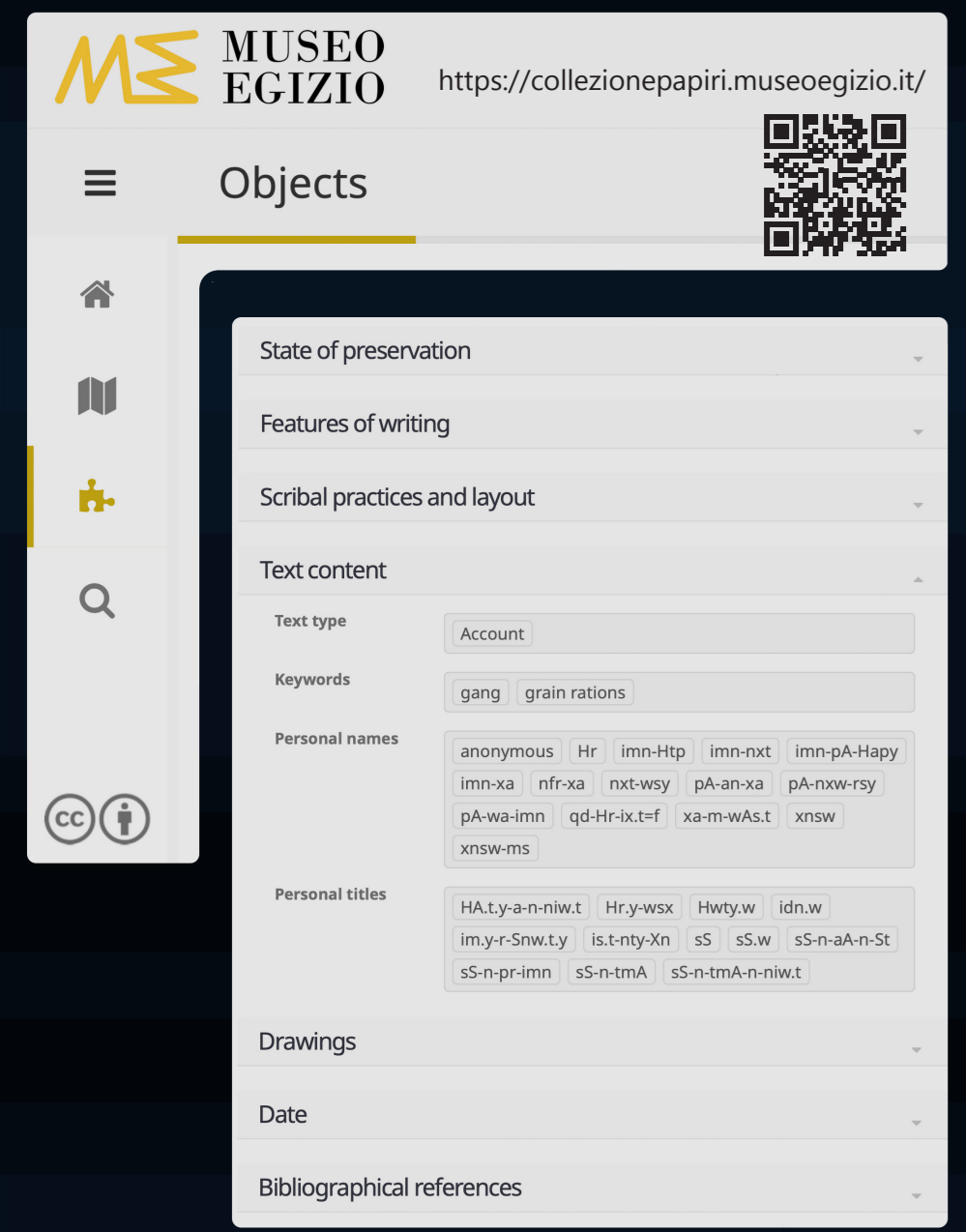


THE TURIN PAPYRUS ONLINE PLATFORM (TPOP)



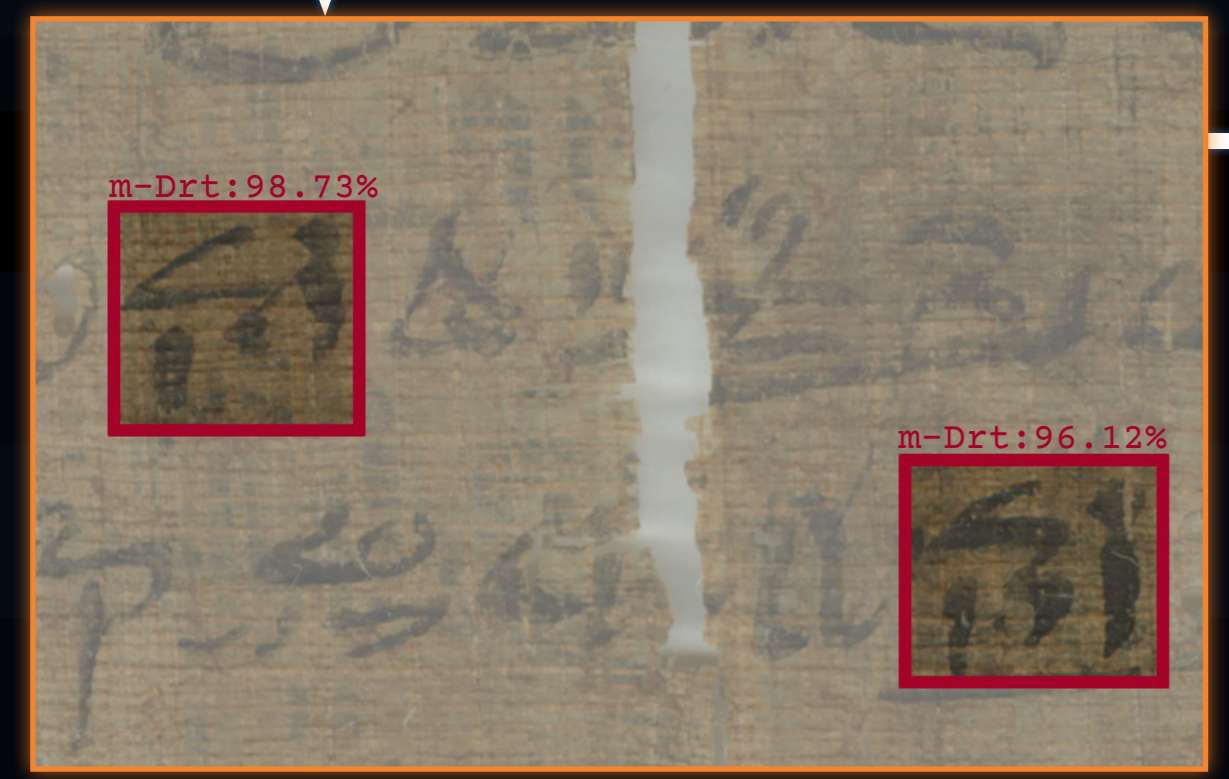
... is our working and publishing tool in the development of which the Crossing Boundaries team has been involved. The database provides online access to the papyrus collection of the Museo Egizio. Our material comprises 9,000 fragments and about 230 larger ensembles originating mainly from Deir el-Medina and dated to the Ramesside Period. Each TPOP entry includes metadata about the objects (=fragments) and documents (=manuscripts), features of the scripts, and a description of the text content including the transliteration, transcription, and translation.

1. *ʔbd 3 šmw [...]*
2. *rdy.t nꜣf [...]*
3. *sm ḥrš 5 rmw [...]*
4. *rnp.t-sp 9 ʔbd 1 ʔḥ.t sw 1 rd[y.t ...]*
5. *wʔd sm 8 tb[...]*

ANNOTATION AND DETECTION OF SIGN GROUPS



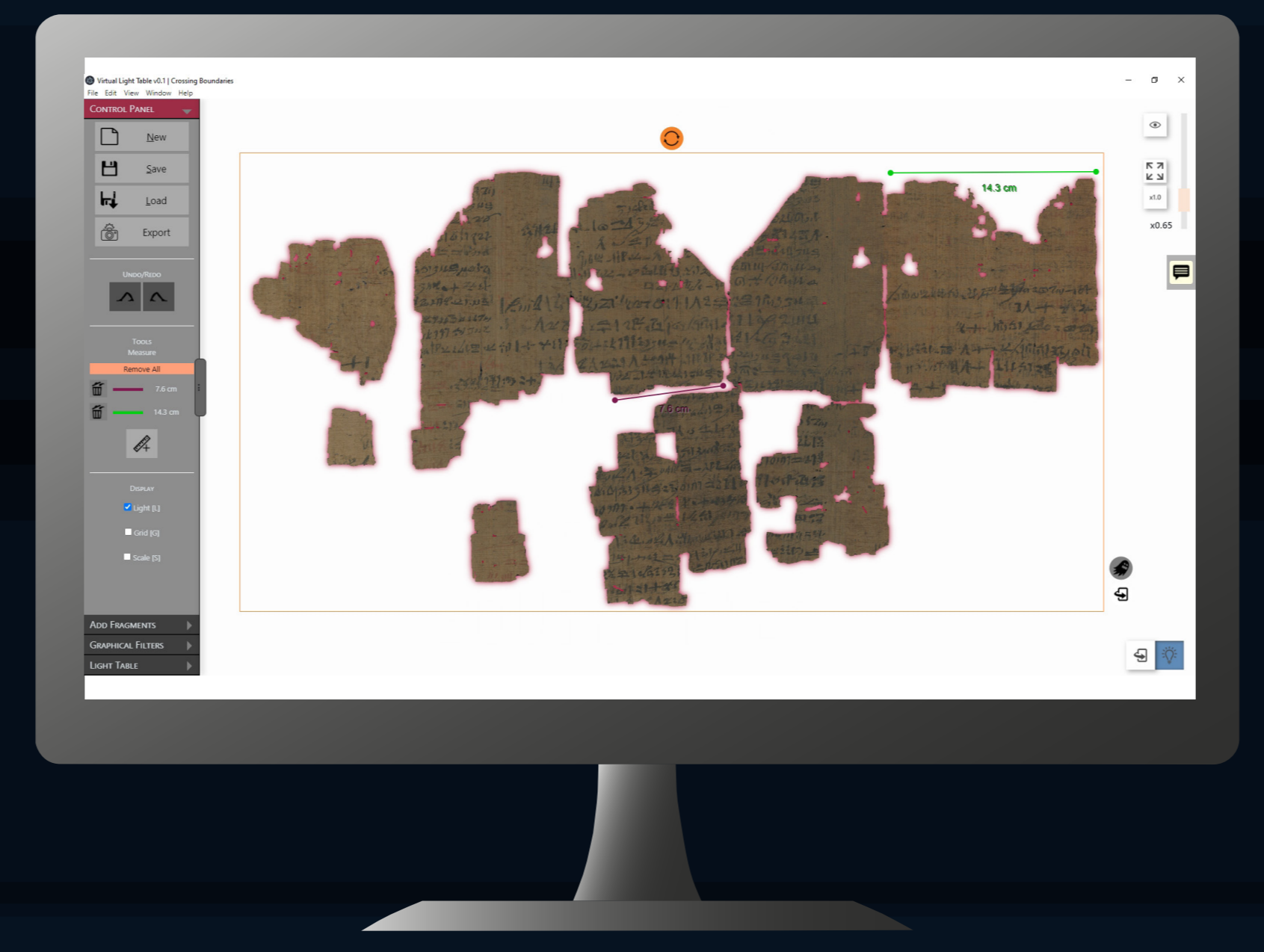
... comprises the workflow for one of our approaches on the automatic sorting, identification and classification of papyri based on their texts. First, we annotate manuscripts by tagging specific signs and sign groups which we think might serve best as significant discriminators. After training a machine on these samples, we locate occurrences on yet unseen papyri and classify the manuscripts accordingly.



- our goal:
- improving the detection and localisation of sign groups in hieratic manuscripts,
 - classifying papyri by text genre based on their visual appearance and sign occurrences,
 - identifying sheet joins,
 - recognising scribal hands by automatically comparing characteristic features.

THE VIRTUAL LIGHT TABLE

... is a digital worktable which allows scholars to access and filter the papyrus fragments in TPOP, add them to the table, and move, rotate, or flip them to find matching pieces and reconstruct documents. Additional features, like graphical filters or machine learning research, may help to find joins. The VLT will be published as open-source software.



CROSSING BOUNDARIES

DIGITAL METHODS AND TOOLS FOR THE RECONSTRUCTION OF FRAGMENTARY PAPYRI

ÄGYPTOLOGIE 2021

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FIBRE STRUCTURE ANALYSIS

... could offer a new method to accurate predictions for joining fragments according to the structure of papyri. In a test setup with modern papyri we provide a consistent lighting environment using a wide range of different settings to record the fibre and surface structure. We then envision to develop automatic methods to detect the fibre structure of a papyrus, the order of its fibres, and try to derive 3D surface models from the photographic recordings.



RECOVERING ERASED TEXTS

... is a key component to understanding manuscript (re)use and is achieved by developing new approaches of recording ink traces on papyrus. The documentation process inspired by digital epigraphy methods comprises different steps of photographing, digital sketching, and inking.

