Compiling Digital Fragments of *ALZ*, a Major Textual Resource for German Romanticism Research, into a Single Comprehensive Text Corpus

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MODELL ROMANTIK
Variation • Reichweite • Aktualität

DFG Deutsche Forschungsgemeinschaft

Jena University Language & Information Engineering Lab

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

What is *ALZ*?

- *Allgemeine Literatur-Zeitung* (General Literature Gazette, ALZ)
- Published between 1785 and 1849 in Jena/Halle, Germany
- Consists of anonymous reviews of contemporary publications
- Most comprehensive review organ around 1800 in Germany
- Invaluable historical resource for literary research on German romanticism

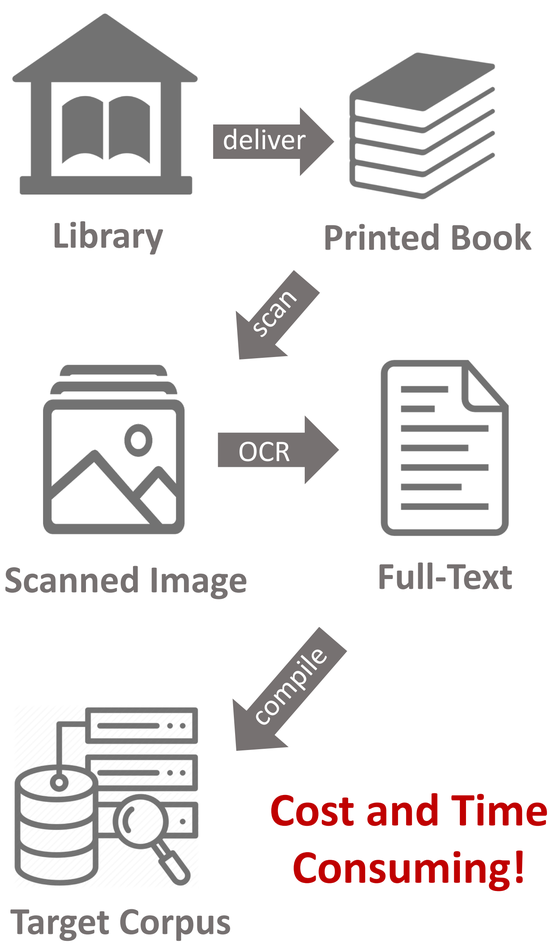
Task

- Create a comprehensive full-text corpus of *ALZ* for research on German romanticism

Scattered Digital Fragments of *ALZ* Hosted by Various Digital Libraries

Collecting

Traditional Workflow



Cost and Time Consuming!

Overview of All Available Full-Text Resources

	Google Books			Internet Archive			Bavarian State Library		
Library	Volumes	Pages	Tokens	Volumes	Pages	Tokens	Volumes	Pages	Tokens
Bavarian State Library	1	285	289,269	-	-	-	152	78,675	76,568,508
University of Lausanne	4	2,008	1,969,395	-	-	-	-	-	-
Harvard University	4	3,056	2,645,386	4	3,054	2,520,832	-	-	-
Indiana University	67	33,721	32,255,992	49	24,923	25,146,053	-	-	-
New York Public Library	103	48,949	47,909,730	94	42,636	42,970,913	-	-	-
Princeton University	38	36,854	35,245,420	29	29,096	30,036,319	-	-	-
Stanford University	2	887	869,272	3	1,102	1,216,273	-	-	-
University of California	45	28,69	28,032,026	54	33,248	33,179,736	-	-	-
University of Illinois	-	-	-	4	3,192	2,820,205	-	-	-
University of Michigan	144	71,681	68,554,109	308	147,559	146,025,563	-	-	-
University of Oxford	46	20,995	20,506,977	56	26,181	25,185,788	-	-	-
Total	**454**	**247,126**	**238,277,576**	**601**	**310,991**	**309,101,682**	**152**	**78,675**	**76,568,508**

Deduplicating

Compiled Corpus (TEI-Format)

Library	Volumes	Pages	Tokens
Bavarian State Library	152	78,675	76,568,508
University of Lausanne	-	-	-
Harvard University	2	1,528	1,322,693
Indiana University	3	2,641	2,547,872
New York Public Library	4	2,08	2,043,980
Princeton University	15	8,038	7,267,803
Stanford University	-	-	-
University of California	9	3,354	3,162,025
University of Illinois	2	1,512	1,299,100
University of Michigan	64	25,538	23,276,002
University of Oxford	8	3,246	2,881,022
Total (≈ 82% of all)	**261**	**126,612**	**120,369,005**

Encoding

Compiling

Deduplicationsformel*

$L \sim Library$
$E \sim OCR\ Engine$
$S \sim Sources \subseteq L \times E$
$F = Fulltexts$
$F \sim \{F_1, F_2, \ldots, F_n\}$
$F_i \sim Duplicates\ of\ text\ i$
$R \subseteq F \times S \sim Text\ exists\ in\ source$
$f^i_{best} = \arg\max_{f \in F_i} \{ocrQuality(s): fRs\}$

Minimum Edit Distance

Manually Generated Ground Truth

Future Work

- Adding Missing Volumes (≈18%)
- OCR Error Correction
- Named Entity Recognition
- Social Network Analysis
- Topic Modeling

Reference: Udo Hahn, Tinghui Duan. Corpus Assembly as Text Data Integration from Digital Libraries and the Web. In: *JCDL '19. Proceedings of the 2019 ACM/IEEE Joint Conference on Digital Libraries*, Urbana-Champaign, IL, USA, June 02–06, 2019. Pages 25-28.
Corpus Available under: https://github.com/julielab/alz
* The authors would like to thank Erik Fässler for his idea to formalize the step of deduplication.

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