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Modeling User Repeat Consumption Behavior for Online Novel Recommendation

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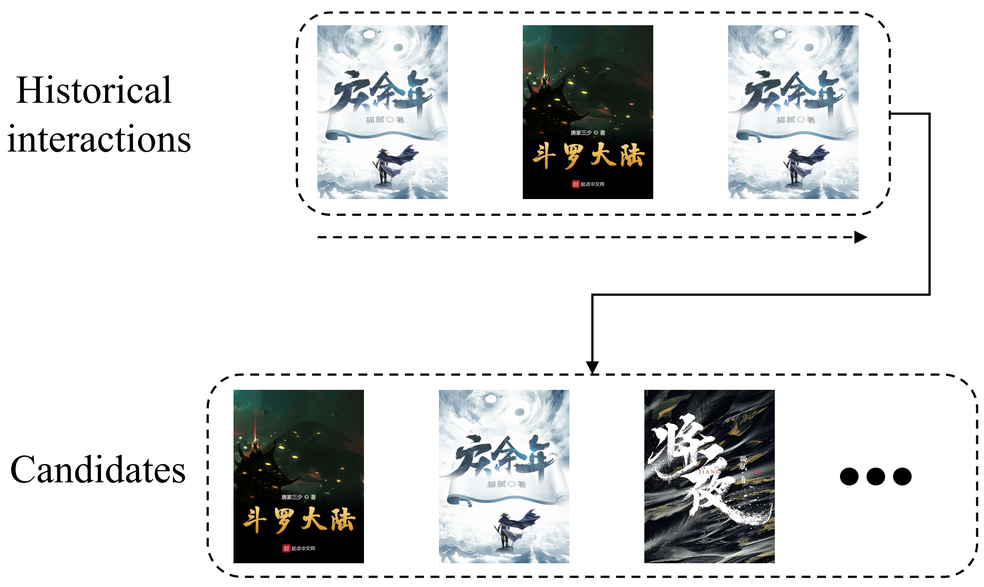
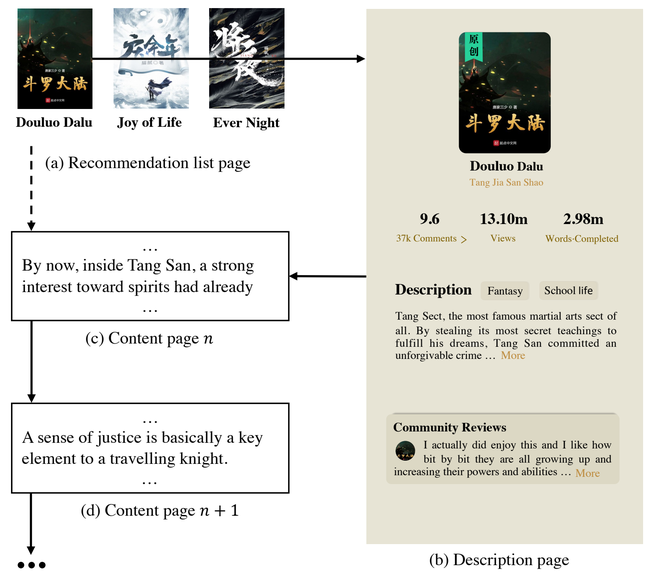
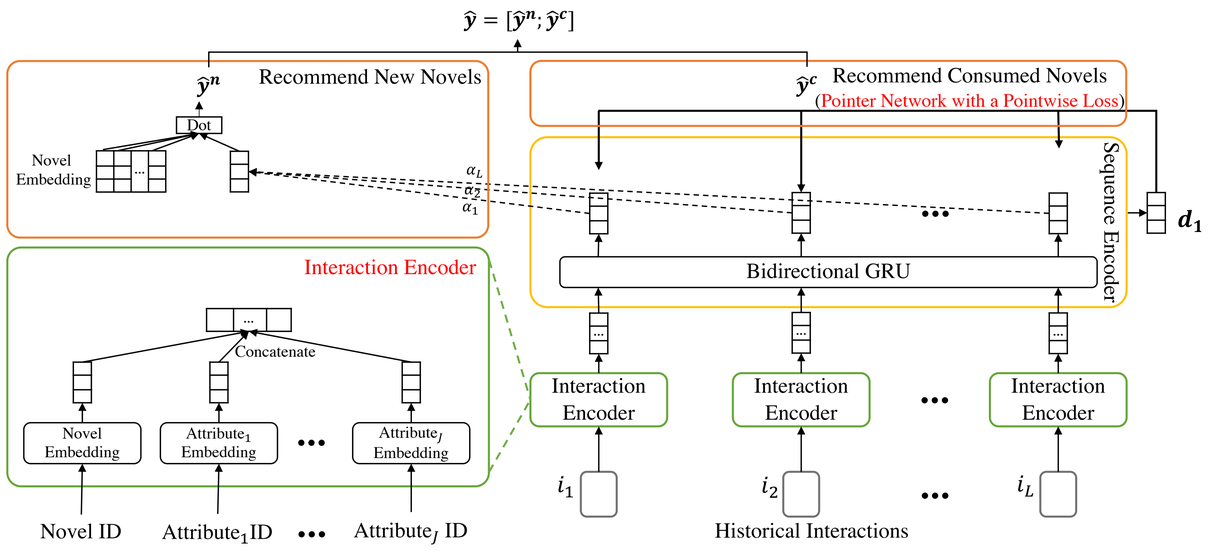
• Motivation

- Online novel recommendation is an important but underexplored task
- Repeated interactions with a novel are common
- Interactions between users and novels are informative



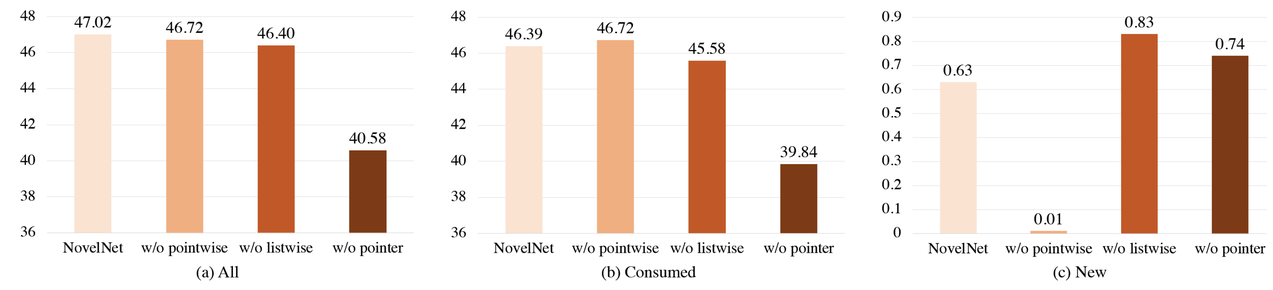


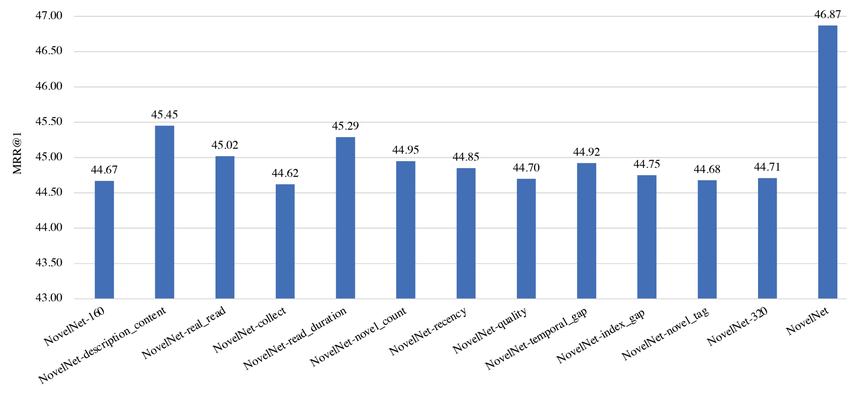
• Our method: NovelNet



• Experiment

Method	MRR (%)				Recall (%)		
	@1	@5	@10	@20	@5	@10	@20
AR	40.36	43.09	43.52	43.89	47.86	51.18	56.55
SR	42.58	45.13	45.70	46.06	49.85	54.10	59.50
SKNN	32.84	39.71	40.65	41.00	51.19	58.16	63.13
VSKNN	41.97	46.85	47.49	47.80	54.52	59.37	63.81
STAN	43.06	48.78	49.50	49.84	57.81	63.11	68.11
VSTAN	43.88	48.62	49.25	49.51	55.99	60.63	64.32
NARM	42.90	47.27	48.01	48.43	54.72	60.25	66.34
GRU4REC$^+$	42.20	45.64	46.28	46.68	51.81	56.62	62.20
RepeatNet	44.93	49.52	49.99	50.36	56.42	60.03	65.56
SLIST	38.66	44.07	44.81	45.18	53.05	58.51	63.88
Proxy-SR	41.69	46.01	46.79	47.14	53.44	59.30	64.36
RecentNovel	44.48	-	-	-	-	-	-
NovelNet	**47.02**	**51.33**	**52.00**	**52.37**	**58.36**	**63.43**	**68.72**





• Conclusion

- A new online novel recommendation dataset is built and is released for public.
- Our NovelNet is effective. Both modeling repeat interaction behavior and encoding interactions at a fine-grained level are useful.