CHEN, NUO 陈诺

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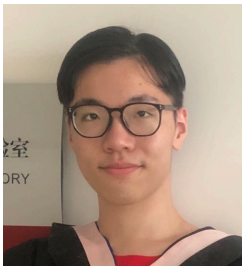

EDUCATION

Waseda University,Department of Computer Science and Communications Engineering, *Master of Engineering* 2021.04 - 2023.03

- **GPA**: 3.50 / 4
- **Main Courses**: Information Access Evaluation, Natural Language Processing, Cognitive Science Study, Applied Statistics
- **Research Focuses**: User-oriented search evaluation, Debiasing of algorithm biases and cognitive biases in information search and recommander systems
- **Supervisor**: Prof. Tetsuya Sakai (ACM distinguished member, SIGIR Academy member)
- **Merits**: Department award issued by the Department of Computer Science and Communications Engineering, Waseda University (2023)

Peking University, Major of Information Management and Information System, *Bachelor of Management* 2016.09 - 2020.07

- **GPA**: 3.65 / 4 (Ranking: top 10%)
- **Main Courses**: Interactive Information Retrieval, Qualitative Data Analysis, Survey and Statistics Methods, The Technology of Textual Information Analysis, Introduction to Data Mining
- **Merits**:
  - 2017 - "May 4th" Scholarship "五四"奖学金 (University-level)
  - 2017 - Merit Student 三好学生 (University-level)
  - 2018 - Award for Academic Excellents 学习优秀奖 (University-level)
  - 2020 - Excellent Undergraduate Graduation Design (Dissertation) of Beijing Ordinary Higher Education Institution 北京市普通高等学校优秀本科生毕业设计 (论文) (Province-level)

SELECTED PUBLICATIONS

(* = equal contribution)

- Tetsuya Sakai, Sijie Tao, **Nuo Chen**, Yujing Li, Maria Maistro, Zhumin Chu, Nicola Ferro. 2023 (to appear). On the Ordering of Pooled Web Pages, Gold Assessments, and Bronze Assessments. *ACM TOIS*
- **Nuo Chen***, Donghyun Park*, Hyungae Park, Kijun Choi, Tetsuya Sakai, and Jinyoung Kim. 2023. Practice and Challenges in Building a Universal Search Quality Metric. In ***SIGIR'23*** (Industrial Track)
- **Nuo Chen**, Jiqun Liu, and Tetsuya Sakai. 2023. A Reference-DependentModel for Web Search Evaluation: Understanding and Measuring the Expe-rience of Boundedly Rational Users. In ***WWW'23*** (Full Paper)
- **Nuo Chen**, Fan Zhang, and Tetsuya Sakai. 2022. Constructing Better Evaluation Metrics by Incorporating the Anchoring Effect into the User Model. In ***SIGIR'22*** (Short Paper)
- 梁兴堃, **陈诺**. 图书馆用户的信息素养对借阅行为的影响机理研究 [J]. 图书情报工作, 2022, 66(21): 87-96.
- 梁兴堃, **陈诺**. 图书馆焦虑的测量、前因和后果——基于高校图书馆用户的实证研究 [J]. 图书情报工作, 2022, 66(19): 61-71.

RESEARCH EXPERIENCE

Real Sakai Lab, Waseda University. Supervisor: Tetsuya Sakai 酒井哲也 2021.4 -

- **Building an explainable search quality metric for business practice**. One of the most challenging aspects of operating a large-scale web search engine is to accurately evaluate and monitor the search engine′s result quality. From a business perspective, in the face of such challenges, it is important to establish an overall

search quality metric that can be easily understood by the entire organisation. In this study, we collaborate with Naver, a Korean tech firm, to introduce a model-based quality metric using Explainable Boosting Machine as the classifier and online user behaviour signals as features to predict search quality. The proposed metric takes into account a variety of search types and has good interpretability. One paper of the work was accepted by by SIGIR′23.

- **Pyschology-oriented search evaluation measures**. Information retrieval(IR) researchers are relying heavily on evaluation measures in experiments to improve search engines′ effectiveness. Therefore, evaluation measures that accurately reflect how users perceive the usefulness of the search engine result pages (SERPs) while having strong statistical power to discriminate search systems pairs are preferred. Existing evaluation measures for search systems treat users as rational decision-makers pursuing maximised utility. However, people′s decisions un can be affected by cognitive biases and therefore be deviated from the global rational cases. I tried to redesign existing evaluation measures or develop new ones by incorporating the factor of users′ cognitive biases, like the anchoring effect, the reference dependence effect, etc. On the other hand, my work also meta-evaluates existing evaluation indicators from a statistical point of view. Two papers of the work was accepted by SIGIR′22 and WWW′23.

Digital Humanity Center (KV Lab), Peking University. Supervisor: Jun Wang 王军 2019.1 - 2020.7

- In 2020, I was involved in the development of the China Biographical Database (CBDB) Community Edition database under the supervision of Professor Jun Wang. The project was led by Harvard University, with a team of researchers from Peking University, Harvard University and Academia Sinica in Taiwan collaborating. I was responsible for the web development of the database, using Vue.js to achieve an efficient unification of data management and web presentation. My graduation project was based on this project and was awarded the Outstanding Undergraduate Graduation Design (Thesis) in Beijing.
- In the year of 2019, I am involved in the project of building a system visualising the New Confucian Canon. My main contribution was data visualisation, including cleaning up data in various forms and presenting them on webpage through libraries like d3.js and EChart.js. One paper based on the work was accepted by DH2020. Website: https://syxa.pkudh.org/

Other Acdemic Activities

SIGIR-AP 2023, PC Member 2023.6 - 2023.11

- I will serve as a PC member for SIGIR-AP 2023, responsible for reviewing a portion of the submissions

NTCIR 17 FairWeb-1, Task Organiser and Gold Assesor 2023.1 - 2023.12

- I served as task organiser and gold assesor of the NTCIR17 FairWeb-1 task since 2023. My work was to create topic for retrieval task and to assess relevance level for the pooled documents as the gold assesor.

NTCIR 16 WWW-4, Task Ogniser and Gold Assesor 2021.9 - 2022.6

- I served as task organiser and gold assesor of the NTCIR16 WWW-4 task from 2021 to 2022. My work was to create topic for retrieval task and to assess relevance level for the pooled documents as the gold assesor.

Skills

- Good understanding in Python, JavaScript, TypeScript programming. Experience in developing machine learning and deep learning models using frameworks such as sklearn and PyTorch, as well as game development experience using the Unity engine.
- English. CET-4, CET-6, TOEFL iBT 100 (2019, Expired)
- Japanese. JLPT N1 155