# Soyoung **Oh**

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## **Int**erests

ARTIFICIAL INTELLIGENCE · COGNITIVE SCIENCE · NLP

My research broadly lies in the areas of human-centered computing. Specifically, I would like to advance the explainability of human behaviors by employing AI models, especially language processing.

## **Edu**cation

### **Universität des Saarlandes**
*Saarbrücken, Germany*

PHD IN COMPUTER SCIENCES
*Sep. 2023 -*

- Advisor: Vera Demberg

### **École polytechnique fédérale de Lausanne (EPFL)**
*Lausanne, Switzerland*

PHD IN COMPUTER AND COMMUNICATION SCIENCES (EDIC)
*Sep. 2022 - Aug. 2023*

- First project Advisor: Antoine Bosselut @ EPFL & Lonneke van der Plas @ IDIAP
- Second project Advisor: Frederic Kaplan & Maud Ehrmann & Boros Emanuela @ EPFL

### **Sungkyunkwan University (SKKU)**
*Seoul, South Korea*

M.S. IN APPLIED ARTIFICIAL INTELLIGENCE
*Aug. 2020 - Feb. 2022*

- Advisor: Eunil Park
- Master's Thesis: Understanding Difficulties of Content Filterings and Humans' Cognitive Bias in Algorithmic Recommendations

### **Sungkyunkwan University**
*Seoul, South Korea*

B.A. IN PSYCHOLOGY

B.S. IN ENGINEERING, INTERDISCIPLINARY PROGRAM OF CONVERGENT SOFTWARE - SAMSUNG CONVERGENCE SOFTWARE COURSE
*Mar. 2016 - Aug. 2020*

## **Res**earch Experience

### **Researcher**
*European Cooperation in Science & Technology*

MULTIPLEYE
*Sep. 2022 - Current*

- Collaborating with the researchers in the project, main researcher as Nora Hollenstein, (Group leader) Jamal Nasir.
- Leading survey paper for using eye-tracking dataset to improve performance/explainability of NLP techniques.
- Revising the code for pre-processing eye-tracking dataset.

### **Research Assistant**
*EPFL*

DIGITAL HUMANITIES LAB
*Apr. 2023 - Aug. 2023 (Expected)*

- Advisor: Frederic Kaplan & Maud Ehrmann & Boros Emanuela
- Fine-tuning adapter module with low-resource historical dataset to deploy knowledge from large language model (LLaMA).

### **Research Assistant**
*EPFL*

NLP LAB
*Sep. 2022 - Feb. 2023*

- Advisor: Antoine Bosselut & Lonneke van der Plas
- Conducted prompt tuning to implement chain-of-thought prompt for measuring creativity ability of large language models.
- Constructed Linux environment for large language model (e.g., OPT175B, BLOOM175B) in EPFL cluster.
- Conducted data analysis for newly constructed persona dialogue dataset (Accepted in ACL'23).

### **Research Intern**
*Georgia Institute of Technology (Remote)*

CLAWS LAB
*Jul. 2021 - Apr. 2022*

- Advisor: Srijan Kumar
- Engaged in survey paper on analyzing the countering misinformation efforts of the crowds.
- Devised natural language processing method to debunk misinformation based on individual features of the crowds.

**Undergraduate Research Assistant** *SKKU*
Data eXperience Lab *Jul. 2019 - Aug. 2020*
- Advisor: Eunil Park
- Explored user experience of augmented reality and virtual reality products (Funded by NRF of Korea)
- Developed a Deep Learning Model for Predicting Service Reuse (Funded by the NRF of Korea)

# Publication

*j: journal · c: conference · Equal Contribution[1] · Corresponding Author\**

**c4** Silin Gao, Beatriz Borges[1], **Soyoung Oh**[1], Deniz Bayzit[1], Saya Kanno, Hiromi Wakaki, Yuki Mitsufuji, & Antoine Bosselut (2023).
PeaCoK: Persona Commonsense Knowledge for Consistent and Engaging Narratives. ACL 2023. [PDF]

**c3** **Soyoung Oh**, & Eunil Park (2022).
Are you aware of what you are watching? Role of machine heuristic in online content recommendations. ICWSM 2022 Workshop on Cyber Social Threats (CySoc 2022). [PDF]

**c2** Sangeun Lee[1], **Soyoung Oh**[1], Minji Kim, & Eunil Park (2022).
Measuring Embedded Human-like Bias in Face Recognition Models. AAAI 2022 Workshop on Artificial Intelligence with Biased or Scarce Data (AIBSD 2022). [PDF]

**c1** **Soyoung Oh**[1], Jisu Kim[1], Seungpeel Lee.[1], & Eunil Park (2021).
Jujeop: Korean Puns for K-pop Stars on Social Media. In Proceedings of the Ninth International Workshop on Natural Language Processing for Social Media 2021, NAACL HLT'21 Workshop. [PDF]

**j7** Dahye Jeong[1], **Soyoung Oh**[1], & Eunil Park (2022).
DemoHash: Hashtag Recommendation based on User Demographic Information. Expert Systems With Applications. [HTML]

**j6** **Soyoung Oh**, Honggeun Ji, Jina Kim, & Eunil Park (2022).
Deep learning model based on expectation confirmation theory to predict customer satisfaction in hospitality service. Information Technology & Tourism. [HTML]

**j5** Honggeun Ji, **Soyoung Oh**, Jina Kim, & Eunil Park (2022).
Integrating Deep Learning and Machine Translation for Understanding Unrefined Languages. CMC-Computers, Materials & Continua, 70(1), 669–678. [HTML]

**j4** Jina Kim, Honggeun Ji, **Soyoung Oh**, Syjung Hwang, Eunil Park, & del Pobil, A. P. (2021).
A deep hybrid learning model for customer repurchase behavior. Journal of Retailing and Consumer Services (SSCI, JCR 2019 IF=4.219, Q2 in Business). [HTML]

**j3** Jina Kim, Yeonju Jang, Kunwoo Bae, **Soyoung Oh**, Namjeong Jeong, Eunil Park, & del Pobil, A. P. (2021).
Between comments and repeat visit: capturing repeat visitors with a hybrid approach. Data Technologies and Applications. [HTML]

**j2** **Soyoung Oh**, Jina Kim, Honggeun Ji, Eunil Park, Jinyoung Han, Minsam Ko, & Moonyoung Lee (2020).
Cross-cultural Comparison of Interactive Streaming Services: Evidence from Twitch. Telematics and Informatics, ISSN: 0736-5853 (SSCI, JCR 2019 IF=4.139, Q1 in Information Science & Library Science). [HTML]

**j1** Jina Kim, Soyeon Shin, Kunwoo Bae, **Soyoung Oh**, Eunil Park, & del Pobil, A. P. (2020).
Can AI be a content creator? Effects of content creators and information delivery methods on the psychology of content consumers. Telematics and Informatics, ISSN: 0736-5853 (SSCI, JCR 2019 IF=4.139, Q1 in Information Science & Library Science). [HTML]

# Teaching Experience

**Teaching Assistant** *EPFL*
CS486, Interaction Design *Spring semester, 2023*
- Assisted making and grading assignments in the field of HCI.

**Teaching Assistant** *SKKU*
AAI3020, Dept. of Applied Artificial Intelligence at Undergraduate Course *Fall semester, 2020*
- Led research project with undergraduate students and successfully submitted paper to conference [c2]

**Instruction Assistant** *KINTEX, South Korea*
IoT Maker Booth @ E2FEsta2018 *Sept. 2018*
- Assisted making IoT lamp with Arduino

# Work Experience

**Silikal Korea Construction Chemicals Co., Ltd.** *Seoul, South Korea*
Intern *May 2018 - Jul. 2018*
- Done internship program with logistics, sales, and accounting.

**Silikal GmbH**
*Mainhausen, Germany*

INTERN
*Feb. 2018 - Apr. 2018*

- Done internship program at sales & sales support in Export, Import division.

## Honors & Awards

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|---|---|---|
| 2022 | **Attendance Scholarship**, ICWSM-2022 Grant Program | *ICWSM* |
| 2022 | **EDIC PhD Fellowship**, A one-year fellowship | *EPFL* |
| 2021 | **Attendance Scholarship**, ICWSM-2021 Grant Program | *ICWSM* |
| 2020 | **Bachelor's Degree Linked Master Program Scholarship**, Full tuition of last semester of undergraduate | *SKKU* |
| 2019 | **Travel Scholarship**, Language Exchange student @ Okayama University | *Campus Asia* |
| 2019 | **Academic Excellence Scholarship**, 70% of tuition from Dept. of Social Science (GPA:4.4/4.5) | *SKKU* |

## Academic Services

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|---|---|---|
| 2022 | **Student Volunteer**, ICWSM'22 Virtual Conference | *ICWSM* |
| 2022 | **Student Volunteer**, FAccT'22 On-Site Conference | *FAccT* |
| 2022 | **Reviewer**, Reviewed papers @ *alt.chi* track | *CHI* |
| 2021 | **Student Volunteer**, NAACL HLT'21 Virtual Conference | *NAACL* |

## Skills

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|---|---|
| **Programming** | Python, SPSS, LaTeX, JAVA, C |
| **Machine Learning** | Tensorflow, Keras, Pytorch |
| **Front-end** | HTML, CSS, Node.js |
| **User Research** | Interviewing, Conducting surveys, Experimental Design |
| **Languages** | Korean, English, Japanese |

## References

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|---|---|
| **Eunil Park** | eunilpark@skku.edu, Assistant Professor @ Sungkyunkwan University |
| **Antoine Bosselut** | antoine.bosselut@epfl.ch, Tenure Track Assistant Professor @ EPFL |
| **Lonneke van der Plas** | lonneke.vanderplas@idiap.ch, Professor @ IDIAP |