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Research Interests

Various data mining studies focusing on recommender systems with deep learning.

- **Recommender systems** for personalized and group recommendation with various deep learning techniques.
- **Data Mining** for analyzing data from IoT devices to find the hidden knowledge in smart home area.
- **Natural Language Processing** for Korean language education.

Education

2012.03 ~ 2018.02, Ph.D. in Computer Science & Engineering, Korea University
2008.03 ~ 2012.02, B.S. in Computer & Communication Engineering, Korea University
2004.03 ~ 2007.02, Goyang Foreign Language High School

Experience

2020.09 ~ Assistant Professor, Inha University
2019.03 ~ 2020.08, Assistant Professor, Sejong University
2018.09 ~ 2019.02, Post-Doc, Sejong University
2018.03 ~ 2018.08, Research professor, Korea University

Publication

- [1]. SeungJoo Lee, Seokho Ahn, **Young-Duk Seo***, *Relation Modeling on Knowledge Graph for Interoperability in Recommender Systems*, **SAC 2023**: Proceedings of the 38th ACM/SIGAPP Symposium on Applied Computing (Oral).
- [2]. Euijong Lee, Sukhoon Lee, **Young-Duk Seo***, *Deep learning based self-adaptive framework for environmental interoperability in internet of things*, **SAC 2022**: Proceedings of the 37th ACM/SIGAPP Symposium on Applied Computing (Poster).
- [3]. Euijong Lee, **Young-Duk Seo***, Young-Gab Kim, *Self-Adaptive Framework with Master-Slave Architecture for Internet of Things*, IEEE Internet of Things Journal. 9(17), 2022. [pdf]
- [4]. **Young-Duk Seo***, Young-Gab Kim, Euijong Lee, Hyungjin Kim, *Group recommender system based on genre preference focusing on reducing the clustering cost*, Expert Systems with Applications. 183, 2021.
- [5]. Se-Ra Oh, **Young-Duk Seo***, Euijong Lee, Young-Gab Kim, *A comprehensive survey on security and privacy for electronic health data*, International Journal of Environmental Research and Public Health. 18(18), 2021.
- [6]. Euijong Lee, **Young-Duk Seo***, Se-Ra Oh, Young-Gab Kim, *A Survey on Standards for Interoperability and Security in the Internet of Things*, IEEE Communications Surveys & Tutorials. 23(2), 2021.
- [7]. **Young-Duk Seo***, Yoon-Sik Cho, *Point of interest recommendations based on the anchoring effect in location-based social network services*, Expert Systems with Applications, 164, 2021.
- [8]. Euijong Lee, **Young-Duk Seo***, Young-Gab Kim, *A Cache-based Model Abstraction and Runtime Verification for the Internet of Things Applications*, IEEE Internet of Things Journal. 7(9), 2020
- [9]. **Young-Duk Seo***, Euijong Lee, Young-Gab Kim, *Video on demand recommender system for internet protocol*

- television service based on explicit information fusion, *Expert Systems with Applications*. 143, 2020.
- [10]. Jin-Yong Yu, Euijong Lee, Se-Ra Oh, **Young-Duk Seo***, Young-Gab Kim, *A Survey on Security Requirements for WSNs: Focusing on the Characteristics Related to Security*, *IEEE Access*. 8, 2020.
 - [11]. Euijong Lee, **Young-Duk Seo***, Young-Gab Kim, *Self-Adaptive Framework Based on MAPE Loop for Internet of Things*, *Sensors*. 19(13), 2019.
 - [12]. Euijong Lee, **Young-Duk Seo***, Young-Gab Kim, *A Nash equilibrium based decision-making method for internet of things*, *Journal of Ambient Intelligence and Humanized Computing (JAIHC)*, 2019.
 - [13]. Euijong Lee, Young-Gab Kim, **Young-Duk Seo***, Doo-Kwon Baik, *Self-Adaptive Framework with Game Theoretic Decision Making for Internet of Things*, **TENCON 2018**: International technical conference of IEEE Region 10.
 - [14]. Hyunjin Choi, Jangwon Gim, **Young-Duk Seo***, Doo-Kwon Baik, *VPL-Based Big Data Analysis System: UDAS*, *IEEE Access*. 6, 2018.
 - [15]. **Young-Duk Seo***, Young-Gab Kim, Euijong Lee, Kwang-Soo Seol, Doo-Kwon Baik, *An enhanced aggregation method considering deviations for a group recommendation*, **Expert Systems with Applications**. 93, 2018.
 - [16]. Kwangsoo Seol, Young-Gab Kim, Euijong Lee, **Young-Duk Seo***, Doo-Kwon Baik, *Privacy-preserving attribute-based access control model for XML-based electronic health record system*, *IEEE Access*. 6, 2018.
 - [17]. **Young-Duk Seo***, Young-Gab Kim, Euijong Lee, Kwang-Soo Seol, Doo-Kwon Baik, *Design of a smart greenhouse system based on MAPE-K and ISO/IEC-11179*, **ICCE 2018**: IEEE International Conference on Consumer Electronics (Poster).
 - [18]. Euijong Lee, Young-Gab Kim, **Young-Duk Seo***, Kwangsoo Seol, Doo-Kwon Baik, *RINGA: Design and verification of finite state machine for self-adaptive software at runtime*, **Information and Software Technology**. 93, 2018.
 - [19]. Euijong Lee, Young-Gab Kim, **Young-Duk Seo***, Kwangsoo Seol, Doo-Kwon Baik, *An Evaluation Method for Content Analysis Based on Twitter Content Influence*, **IJSEKE**: International Journal of Software Engineering and Knowledge Engineering. 27(5), 2017.
 - [20]. Euijong Lee, Young-Gab Kim, **Young-Duk Seo***, Kwangsoo Seol, Doo-Kwon Baik, *Runtime verification method for self-adaptive software using reachability of transition system model*, **SAC 2017**: Proceedings of the Symposium on Applied Computing (Poster).
 - [21]. **Young-Duk Seo***, Young-Gab Kim, Euijong Lee, Doo-Kwon Baik, *Personalized recommender system based on friendship strength in social network services*, **Expert Systems with Applications**. 69, 2017.

Courses

Fall, **CSE1112**: Introduction to Computer Engineering
 Fall, **CSE2105**: Computational Linear Algebra in Computer Science
 Fall, **IGB5054**: Neural Networks
 Fall, **CSE2113**: Introduction to OpenSource SW
 Spring, **CSE1112**: Introduction to Computer Engineering
 Spring, **CSE3207**: Database
 Spring, **CSE4205**: Capstone Design in CSE
 Spring, **ECE6065**: Data Science