Seoyeong Park | Raleigh, NC

spark43@ncsu.edu
919-614-5664

GitHub
LinkedIn
Website

EDUCATION

Ph.D in Computer Science — Raleigh, NC | Aug 2021 - May 2026 Expected
North Carolina State University — Advisor: Dr. Munindar P. Singh (Multiagent Systems and Social AI Lab)
Dissertation Proposal: *Understanding Minds to Shape Behavior: User-Centric Persuasion for Effective Behavior Change*

Bachelor of Science in Computer Science, Applied Math and Statistics — Songdo, Incheon | Aug 2014 - May 2018
Stony Brook University

EXPERIENCE

RESEARCH INTERN | Lawrence Livermore National Lab — Livermore, CA | May 2025 – Aug 2025

- Will design and implement RL-based scheduling policies and integrate them with ML-based performance models within a scheduling simulator (**Upcoming position starting May 27, 2025**)

RESEARCH INTERN | Nagoya University — Nagoya, Japan | Jun 2024 – Aug 2024

- Designed and Implemented a clustering-based multitask classification model to predict distinct customer behavior patterns utilizing **machine learning** and advanced **statistical analysis**; *Advised by Dr. Kawaguchi Nobuo*
- Developed a conceptual framework of cognitive agents for modeling routine behavior

RESEARCH ASSISTANT | NCSU — Raleigh, NC | Apr 2023 – Present

Contextual Persuasion for Prosocial Behavior

- Addressing complex behavioral challenges by identifying hierarchical cognitive mechanisms behind decision-making to enhance explainability and persuasiveness in human-agent interactions using **inverse reinforcement learning**
- Developing an agent-based simulation for strategic interventions that are more aligned with individual cognitive states incorporating both latent cognitive states and contextual influences

Reinforcement Learning Model for Multi-Objective Food Allocation Optimization System

- Simulated a user modeling framework to **optimize** food allocation by capturing user **preferences** and persuading taste shifts toward prosocial behavior using persuasive strategies
- Trained a **multistakeholder reinforcement learning** model to balance benefits for users and the community
- Conducted a human study to validate assumptions and decision-making processes by developing a Flutter app

Analysis of Cognitive Accessibility Issues and Technology Adoption in Mobile App Usage

- Proposed a conceptual framework for an **empathy-focused, human-centered** design process utilizing AI for mild cognitive impairment
- Investigated barriers to elderly and disability users adopting mobile technology through user reviews identifying unique challenges and key aspects to enhance **cognitive accessibility and user experience**

APPLICATION SOLUTION CONSULTANT | Google via Vaco — Seoul, Korea | Aug 2018 - Jun 2021

- Implemented a comment retrieval system for Google documents, developed an auto-reminder system, and deployed a project summary extractor using **Google Apps Script** and **BigQuery**, boosting project management efficiency by 20%
- Provided customized consultation services for mobile apps and games focusing on **usability**, accessibility, market optimization, and localization to revamp mobile apps for a better user experience

PUBLICATIONS

Park, **Seoyeong**, et al. "Clustering-Based Multitask Classification for Predictive Consumer Behavior Modeling". In *7th International Conference on Activity and Behavior Computing, Abu Dhabi, UAE, Apr 21-25*. 2025. [Abstract]

WORKSHOP PRESENTATIONS

Park, **Seoyeong**, and Munindar P. Singh. "MEAL: Model of Empathy Augmented Logistics for Food Security". *The 5th International Workshop on Autonomous Agents for Social Good (AASG)* (2024). [Abstract]

Park, **Seoyeong**, et al. "Identifying Barriers Faced by Older Adults in Mobile App Usage". *The 6th International Workshop on Autonomous Agents for Social Good (AASG)* (2025). [Abstract]

SKILLS

Languages/Frameworks: Python, SQL, JavaScript | Pandas, Numpy, Matplotlib, Scikit-learn | Korean, English
ML/AI: Reinforcement learning, Machine learning, Agent-based simulation, Statistical modeling, NLP, Data analysis, Visualization