Chung-Kyun HAN

Personal Data

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Education

Jan. 2016 ∼	PhD candidate, School of Information System Singapore Management University, Singapore
Feb. 2015	Master of Science in Engineering, Industrial Engineering Pusan National University, Busan, Korea Thesis: An Online Algorithm for Personal Rapid Transit Dispatching and Routing
Feb. 2013	Bachelor of Science in Engineering, Industrial Engineering (Minor: Mathematics) Pusan National University, Busan, Korea Thesis: The production planning of the oil refining industry considering Certified Emission Reduction

Working Experience

Feb. 2016 ∼ Dec. 2016	Researcher, Institute of Logistics Innovation and Networking, Busan, Korea

Research Experience

Jan. 2017 - Current	**Taxi driver's performance and behavior analysis, with UNiCEN** Dec 2009, five new information boards were set up around Changi Airport to show information on the number of taxis queuing and the number of flights at each terminal. This research project quantifies the impact of information boards on individual taxi driver.
May 2013 - Dec. 2016	**PRT dispatching and routing, with Korea Railroad Research Institute** Personal rapid transit (PRT) is a new transportation system. Its operations are similar to those of an automated guided vehicle (AGV). I developed an online conflict-free vehicle dispatching and routing algorithm for processing dynamically arriving customers. Furthermore, I developed a simulator considering the interference between vehicles that also included visualization of vehicles' movement.
May 2012 - Nov. 2012	**Production planning, with Chang Shin Inc. (Nike's OEM company)** In athletic shoe assembly lines, there are learning effects, because human labors are involved in processes. I formalized the production planning problem and represented it by mixed integer programming. For automating numerous experiments, Python was employed with CPLEX.
Mar. 2010 - Feb. 2012	**Research assistant, in Information and Knowledge Lab.** I participated projects regarding container terminal operation such as AGV routing, integrated scheduling of container handling equipments, and container reshuffling. Through various works, I have been adept at LaTeX, CPLEX, Python and also acquired basic knowledge for R, Hadoop (big data framework).

Publication and Conference

- Chung-Kyun Han, Baek-Hyun Kim, Rag-Gyo Jeong and Byung-Hyun Ha, "A Dispatching and Routing Algorithm for Personal Rapid Transit by Considering Congestion", *The Transactions of the Korean Institute of Electrical Engineers*, vol. 64, no. 11, pp. 1578-1586, 2015.

- Chung-Kyun Han, Bo Bea Kwon, Baek-Hyun Kim, Rag-Gyo Jeong, Hoon Lee and Byung-Hyun Ha, "An Online Personal Rapid Transit Dispatching Algorithm Based on Nearest Neighbor Dispatching Rule", *Journal of the Korea Society for Simulation*, vol. 23, no. 4, pp. 97-109, 2014.

- Bobae Kwon, Chung-Kyun Han and Byung-Hyun Ha, "An Online Dispatching Algorithm Based on Nearest Neighbor Heuristics for Personal Rapid Transit Systems", *2014 Decision Analysis Symposium*, Taipei, Taiwan.

- Chung-Kyun Han, Baek-Hyun Kim and Byung-Hyun Ha, "Online conflict-free dispatching and routing of personal rapid transits based on the nearest neighbor dispatching rule", *Asia Pacific Industrial Engineering and Management Systems Conference 2014*, Jeju, Korea.

- Junho Kim, Chung-Kyun Han, Byung-Hyun Ha and Won Young Yun, "Scheduling of Athletic Shoe Assembly Lines Considering Learning Effect", *International Conference on Industrial Engineering Theory 2013*, Busan, Korea.

Interests

- Optimization, Simulation, and Data mining
- Graph theory, Game theory and Reinforcement learning
- Transportation, Airport and Container terminal industries

Skills

- Program Development: Python, Java
- Mathematical Modeling: CPLEX
- Data Analysis: Pandas (Python), Minitab
- Paperwork: LaTex, MS office