



Strategic Technology and Innovation Management Programme 2019

Exploring disruptive innovation opportunity using deep learning

Dr Yujin Jeong (yujinjeong312@gmail .com) Disruptive innovation has been highlighted as critical source for competitive advantage. For ex-ante prediction, this study identifies disruptive innovation containing using different databases and machine/deep learning as coming of the Big data age. The unique features of disruptiveness are investigated at this project.

Aims

- To explore and predict potential disruptive innovation opportunity
- The disruptive innovation opportunity: Potential and promising technology and innovation to disrupt and reshape market or industry
- Help to identify novel ideas or opportunities to be disruptive in the future
- Methodology: unsupervised & deep learning, natural language processing

Progress

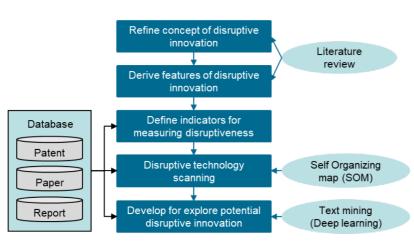
- Completed the reviews on disruptive technology and innovation
- Analysis on scanning disruptive technology

Deliverables

- · Indicators for measuring disruptiveness
- Summary about the process for exploring disruptive innovation

Future research opportunity

- Elaboration the process for exploring contents of disruptive innovation
- · Comparison with other algorithms
- · Validation and feasibility check



Customer Little mainstream customer focus Ease of customer learning Satisfy customer expectation in niche segment	Easy to access niche segment or cost-sensitive segment Have large potential impact on future market	Tec nok	performance of DI may be inferior than mainstream market, but it grows Provide new value & new performance trajectory High future development potential
		Custo	 focus Ease of customer learning Satisfy customer expectation

— ✓ At the beginning, the

Focal point for measuring disruptiveness

- ✓ Performance improvement as time passes → dynamics & change in time
- ✓ Compared to mainstream market

Features	Indicators	Operational definition
Improvement of technological performance	Technological performance to mainstream attribute	- Technologcal capability on specific attribute
	Technology cycle time	Current status in the technology life cycle
		Patent lifetime
	Technology gap	Capability gap between for mainstream attribute

