

Strategic Technology and Innovation Management Programme 2019

Exploring disruptive innovation opportunity using deep learning

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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

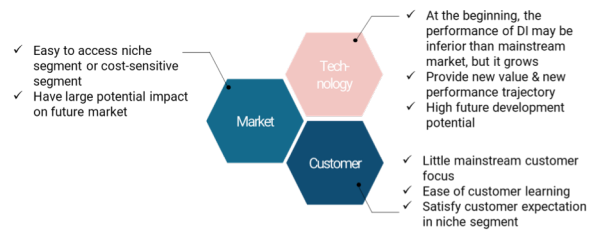
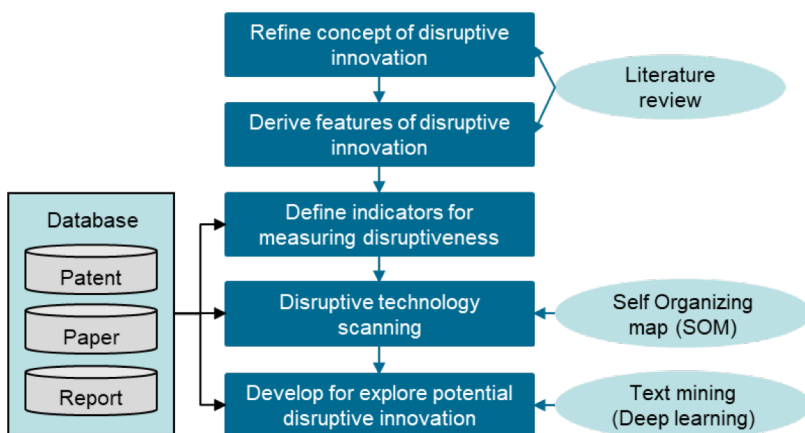
- Completed the reviews on disruptive technology and innovation
- Analysis on scanning disruptive technology

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



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	- Technological capability on specific attribute
	Technology cycle time	Current status in the technology life cycle
	Technology gap	Patent lifetime
		Capability gap between for mainstream attribute