

---

*Tian Ni*

*Purdue IE & GM R&D Operations Research*

Topic: emergent safety issue detection by text mining external data sources including NHTSA VOQ, Twitter, Chevrolet Forum, Facebook and etc to link to internal data sources including Engineering, Supply Chain, Manufacturing, Quality, Warranty data to detect potential hazardous emergent issues.

Tools: ontology extraction, text mining, machine learning, artificial intelligence

Approach: data streaming vendor tools, in house algorithm development

---

*Tian Ni*

*Purdue IE & GM R&D Operations Research*

Challenges: massive data, slow streaming, computational expensive, low prediction accuracy

SDSC: data flow management, real-time streaming/processing, data partition, parallel computing, performance tuning on external data sources