

Automated cell culture media exchanger

Hypothetical AI Product

- A company develops a machine that automatically refreshes cell culture media, tailored to the specific cell type
- The data science team propose two methods to automate this process:
 - R&D team provides specific optimal conditions for all on-market cell types (eg. mice cells ~24h, rat cells ~30h, ...) -> **Expert-derived**
 - DS team applies natural language processing methods to research literature and cell product brochures to identify optimal cell types vs. conditions -> **Data-driven**

Limitations of these approaches

- Expert systems: requires subject expertise, rules change, edge cases
- Data-driven systems: data collection can be time consuming and expensive, data may not be available