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| s.no | Application domain | Complex problem  identified | justification |
| 1 | Education Technology | Adaptive learning systems | Adaptive learning systems require real-time analysis of individual learner’s progress and needs. This demands intelligent algorithms to tailor lessons based on individual pacing, learning style, and feedback |
| 2 | Project management | Project scheduling with  Resource constraints | Resource constrained scheduling involves optimizing the allocation of resources (human financial technical) across multiple projects while constraints this is a complex task due to the large number of variables and constraints involved |
| 3 | Corporate training | Personalized corporate learning paths | ceating personalized learning paths for employees is complex because it requires analyzing individual skill roles career aspirations and organization needs and tailoring content for each employee while ensuring consistency across the enterprise |

**Complex problem table**