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| S.No | Application domain | Complex problem  indentified | Justification |
|  | Healthcare | Implementing Telemedicine services | Telemedicine faces challenges like ensuring data security, accessibility for remote areas, regulatory compliance, and patient adoption. Effective implementation requires robust infrastructure and user-friendly interfaces. |
|  | Environment  Science | Managing Plastic  waste | Reducing plastic waste requires large-scale behavioral change, improved recycling technologies, and government policies to regulate plastic production and disposal. The complexity arises from economic dependencies on plastic-based industries. |
|  | Space exploration | Establishing a Human  Colony on Mars | Space colonization involves overcoming challenges like life support systems, radiation exposure, resource management, and psychological impacts on astronauts. It requires significant advancements in engineering and sustainability strategies. |