# Computer Science GTA Project

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**Section 2 – *Project Information***

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| **Project Title** | Distributed AI as a Service for Demanding Applications in 6G Networks | |
| **Project Highlights:** | 1. | Access to one of the very few 6G prototype networks in UK |
| 2. | Developing new AI services for applications such as Augmented Reality |
| 3. | Collaboration with leading industries and universities in UK and Europe |
| **Project Summary** | | |
| The next-generation 6G networks will further promote efficient and flexible integration of AI services into the network fabric to enable ultra-low-latency, high-bandwidth applications such as Augmented Reality (AR) for education, healthcare, and industry sectors. This PhD project is expected to advance AI as a Service (AIaaS) in 6G networks, leveraging one of the UK’s few 6G prototype experimentation networks to investigate novel cloud-native AI solutions distributed over the edge and the core segments of a 6G network. The research explores agile AI service deployment, optimising performance for demanding applications while emphasising societal KVIs (e.g., digital inclusion, sustainability).  Key innovations may include:   * New AI services to boost the performance of demanding applications e.g., in intelligent resource management over a 6G network. * Distributed AI-driven service orchestration at the 6G edge and core, enhancing real-time decision-making for AR and immersive applications whilst achieving overall optimised capacity utilisation. * Rapid cloud-native AI deployment, enabling scalable, adaptive services across distributed 6G infrastructures. * Experimental validation using a European 6G testbed, in collaboration with leading industries and academic partners.   The project is motivated by the need for intelligent, efficient 6G networks that support high-impact use cases like AR in education. By advancing AIaaS frameworks, this work will contribute to next-gen network architectures, bridging the gap between theoretical AI advancements and practical 6G deployment. The outcomes will drive innovation in 6G standards, while ensuring societal benefits through accessible, high-performance AI services. The project is connected to an ongoing flagship 6G project in Europe, where the University of Leicester is playing a leading role in the concerned demanding applications.  This research is positioned at the intersection of AI, cloud-native systems, and 6G networks, offering a unique research and development opportunity to shape the future of intelligent connectivity in Europe, and to cultivate the younger generation of researchers in UK. | | |