**Hardware Requirements:**

Hardware Requirements can be split into two parts requirements for development and requirements for end-users:

**Requirements for development:**

**Minimum requirements for React :**

* CPU: Intel Core i3
* Ram: 8GB
* Storage: 10GB

**Minimum Requirements for C# development using the Visual Studio IDE:**

* **Processor:** 1.8 GHz or faster processor (dual-core or better recommended).
* **RAM:** 2 GB of RAM (4 GB recommended, 2.5 GB minimum on a virtual machine).
* **Hard Disk Space:** Up to 130 GB of available space depending on features installed; typical installations require 20-50 GB. SSD recommended for performance.
* **Video Card:** Supports a minimum display resolution of 720p (1280 by 720); WXGA (1366 by 768) or higher recommended.

**Minimum requirements for TinyLlama:**

Normally an AI model Like TinyLlama would require a minimum of 16GB VRAM

However by utilizing QLoRA we can bring the minimum requirements down significantly with these being our estimates:

| **Hardware Component** | **Minimum Requirement** | **Recommended** | **Notes** |
| --- | --- | --- | --- |
| GPU VRAM | 6 GB | 8 GB+ (e.g., RTX 3070, 4060 Ti, 3080) | This is the most critical factor. 6 GB is the absolute floor with heavy optimizations. 8 GB is comfortable. |
| System RAM | 16 GB | 32 GB | Needed for loading the dataset and handling background processes. |
| Storage | ~10 GB Free | 20–50 GB Free | Space for the base model (~2.2 GB for TinyLlama-1.1B), datasets, and saved adapter weights. An SSD is highly recommended. |

**Table 1** Hardware requirements for running TinyLlama locally (InsightReactions, 2025).

**Hardware Requirements for End-Users:**

Since we wont be using a server to host our program the Minimum Requirements to run our program locally is dependent on that of TinyLlama’s as such they Are:

* CPU: 4-cores or more
* System RAM: at least 16GB
* GPU: NVIDIA GPUs only, 12GB VRAM or higher is necessary to enjoy AI products offered by Tiny Llama's default configuration at full-speed
* Storage: 60GB SSD, 250GB or more is recommended for additional models and to support future functionality
* Wired internet connectivity during setup, wired LAN connectivity afterwards

**Software Requirements:**

Software Requirements can be split into two parts requirements for development and requirements for end-users:

**Requirements for development:**

**Requirements for React :**

Windows 10/11 or Ubuntu 16 or MacOS 10.10

**Minimum Requirements for C# development using the Visual Studio IDE:**

Windows 10/ Windows 11

**Requirements for TinyLlama:**

Windows 10/11 or Ubuntu 16 or MacOS 10.10

**Requirements for End-Users:**Windows 10/11 or Ubuntu 16 or MacOS 10.10

**References:**

**Requirements for React:**  
[**https://kinsta.com/knowledgebase/install-react/**](https://kinsta.com/knowledgebase/install-react/)

**Requirements for C# Development using The Visual Studio IDE:  
https://learn.microsoft.com/en-us/visualstudio/releases/2022/system-requirements**

**Requirements for TinyLlama:  
https://github.com/InsightReactions/TinyLlama?tab=readme-ov-file**