

BitNet C++ - Windows Installation Documentation

Step 1: Install Required Tools

- Install Visual Studio 2022
- Enable: Desktop Development with C++
- Enable: C++ CMake Tools for Windows
- Enable: Git for Windows
- Enable: C++ Clang Compiler for Windows
- Enable: MS-Build Support for LLVM-Toolset

Step 2: Create Conda Environment

- conda create -n bitnet-cpp python=3.9
- conda activate bitnet-cpp

Step 3: Clone Repository

- git clone https://github.com/microsoft/BitNet.git
- cd BitNet

Step 4: Run Setup Script

- python setup_env.py -md models/BitNet-b1.58-2B-4T -q i2_s

Step 5: Manual Fix (Required)

- Add `#include` on top of these files:
 - 3rdparty\llama.cpp\common\common.cpp
 - 3rdparty\llama.cpp\common\log.cpp
 - 3rdparty\llama.cpp\examples\imatrix\imatrix.cpp
 - 3rdparty\llama.cpp\examples\perplexity\perplexity.cpp

Step 6: Verify Model Setup

- python setup_env.py -md models/BitNet-b1.58-2B-4T -q i2_s