

```
bnb_config = BitsAndBytesConfig(  
    load_in_8bit=True,  
    load_in_8bit_fp32_cpu_offload=True  
)  
model_name = "microsoft/Phi-3-mini-4k-instruct"  
model = AutoModelForCausalLM.from_pretrained(  
    model_name,  
    quantization_config=bnb_config,  
    device_map="auto",  
    trust_remote_code=True  
)
```