Configuration

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This page provides a comprehensive guide to configuring `code_agent`.

1 Configuration Methods

`code_agent` can be configured in three ways, in the following order of precedence (later methods override earlier ones):

1. **Configuration File**: A JSON file (`llm_config.json`) located in `code_agent/config/`. This is the recommended way to set your default configuration.
2. **Environment Variables**: Overrides settings from the configuration file, especially useful in CI/CD environments or for temporary changes.
3. **Programmatic Overrides**: You can pass a dictionary of configuration options when creating the LLM or agent in Python scripts.

2 Configuration File

The primary configuration file is `code_agent/config/llm_config.json`. Here is an example with commonly used options:

```json
{
  "ollama_host": "localhost",
  "ollama_port": 11434,
  "ollama_model": "llama3",
  "temperature": 0.7
}
```

2.1 Options

- `ollama_host`: The hostname or IP address of the Ollama server. Defaults to `localhost`.
- `ollama_port`: The port on which the Ollama server is running. Defaults to `11434`.
- `ollama_model`: The name of the Ollama model to use (e.g., `"llama3"`, `"codellama"`). This model is used for both chat and embeddings.
- `temperature`: The sampling temperature for the LLM. Higher values result in more creative but less predictable responses. Defaults to `0.7`.

3 Environment Variables

You can override any of the options in the configuration file using environment variables. The environment variables are named by prefixing the option name with `CODE_AGENT_`.

- `CODE_AGENT_OLLAMA_HOST`
- `CODE_AGENT_OLLAMA_PORT`
- `CODE_AGENT_OLLAMA_MODEL`
- `CODE_AGENT_TEMPERATURE`

For example, to use a different Ollama model, you could set the following environment variable:

```bash
export CODE_AGENT_OLLAMA_MODEL="another-model:latest"
```

4 Programmatic Overrides

When creating the LLM instance in a Python script, you can pass a dictionary of configuration overrides to the `create_llm` function.

```python
from code_agent.main import create_llm, load_config

# Load base configuration
config = load_config()

# Override specific settings
config["ollama_model"] = "a-third-model:latest"
config["temperature"] = 0.9

# Create LLM with overrides
llm = create_llm(config)
```