MoonshotAI / Kimi-Dev

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open-source coding LLM for software engineering tasks

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yibomiao update harness 749aa72 · 2 days ago

assets	init	last week
kimidev	update harness	2 days ago
resources	init	last week
.gitattributes	init	last week
.gitignore	init	last week
LICENSE.md	init	last week
README.md	Update README.md	3 days ago
setup.py	init	last week

README License

Kimi-Dev

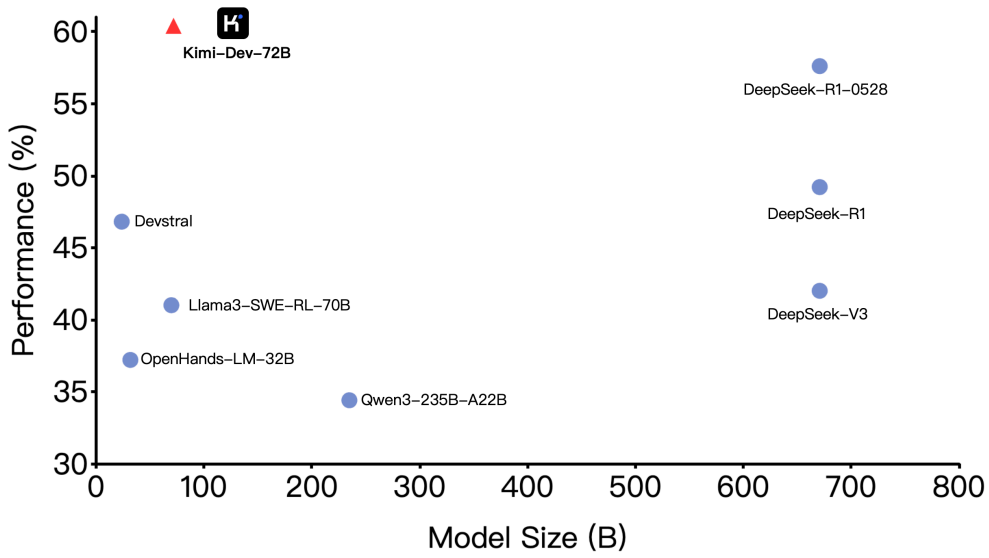
Introducing Kimi-Dev: A Strong and Open-source Coding LLM for Issue Resolution

Kimi-Dev Team

Tech Report (Coming soon...) | Huggingface | Demo (HF Space)

We introduce Kimi-Dev-72B, our new open-source coding LLM for software engineering tasks. Kimi-Dev-72B achieves a new state-of-the-art on SWE-bench Verified among open-source models.

- Kimi-Dev-72B achieves 60.4% performance on SWE-bench Verified. It surpasses the runner-up, setting a new state-of-the-art result among open-source models.
- Kimi-Dev-72B is optimized via large-scale reinforcement learning. It autonomously patches real repositories in Docker and gains rewards only when the entire test suite passes. This ensures correct and robust solutions, aligning with real-world development standards.
- Kimi-Dev-72B is available for download and deployment on Hugging Face and GitHub. We welcome developers and researchers to explore its capabilities and contribute to development.



Performance of Open-source Models on SWE-bench Verified.

⚙️ Installation

```
# clone repo
git clone https://github.com/MoonshotAI/Kimi-Dev.git
# create env
conda create -n kimidev python=3.12
# local install
pip install -e .
```

🛠️ How to use

Prepare repo structure [From Agentless]

Since for each issue in the benchmark (both SWE-Bench Lite and SWE-Bench Verified) we need to checkout the repository and process the files, you might want to save some time by downloading the preprocessed data here: swebench_repo_structure.zip. After downloading, please unzip and export the location as such

```
export PROJECT_FILE_LOC={folder which you saved}
```

Deploy vLLM Model

Installation

```
# Install vLLM with CUDA 12.8.
# If you are using pip.
pip install vllm --extra-index-url https://download.pytorch.org/whl/cu128
# If you are using uv.
uv pip install vllm --torch-backend=auto
```

Serving

```
vllm serve Kimi-Dev-72B --served-model-name kimi-dev --host 0.0.0.0 --port 8000 --gpu-memory-utilization 0.95 --max-seq-len-to-capture 131072 --tensor-parallel-size 8
```

Rollout

Kimi-Dev adopts a simplified two-stage framework for handling code repair and test writing tasks:

1. **File Localization**: Intelligently identify key files that need modification based on problem descriptions and repository structure
2. **Code Editing**: Perform precise code modifications on the located files, including bug fixes or unit test insertions

Compared to multi-step localization methods, we perform localization at the file level and then pass the complete file to the repair step for more detailed reasoning.

Run rollout script:

```
conda activate kimidev
# Bugfixer
python kimidev/examples/rollout_messages_bugfixer.py --model_name {vllm_serve_model}
# Testwriter
python kimidev/examples/rollout_messages_testwriter.py --model_name {vllm_serve_model}
```

👀 Example Results

We provide some example result files as well as the files required for test-time scaling here.

You can also download these files from Google Drive.

💪 Contributing

Welcome to submit Pull Requests or create Issues to help improve the project.

😽 Contact

If you have any questions, please feel free to submit a GitHub issue or contact zhuhan@moonshot.cn.

Citation

If you find our code and models useful, please kindly cite the following information.

```
@misc{kimi_dev_72b_2025,
  title        = {Introducing Kimi-Dev-72B: A Strong and Open Coding LLM for Issue Resolution},
  author       = {{Kimi-Dev Team}},
  year         = {2025},
  month        = {June},
  url          = {\url{https://www.moonshot.cn/Kimi-Dev}}
}
```

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Deployments 2

github-pages last week

Languages

- **Python** 100.0%