

MergeKit

Easily combine models with Arcee MergeKit to create a single, more effective model.

Arcee MergeKit is an industry-leading tool to merge pre-trained models to create smaller, more efficient models without additional training.

The Power of Model Merging

Merges can be run entirely on CPUs with as little as 8 GB of VRAM. The resulting model outranks the input models. You boost the performance and accuracy of your models in a cost-efficient and time-efficient way.



Cost-Effective & Efficient:

Training large models from scratch requires significant compute power and time. MergeKit enables developers to combine pre-trained models, greatly reducing both training time and compute costs. This makes advanced models accessible even to those with limited resources, offering savings of up to 90% compared to closed-source models

Enhanced Performance:

Combining the strengths of multiple neural networks into one robust model significantly improves performance on similar tasks.

Mitigates Catastrophic Forgetting:

Balancing general and domain-specific knowledge, Mergekit enables training on your unique data while retaining essential information by merging back selected 'brains' into the model.

Here at Arcee AI, we use model merging as one of the key techniques in the world-class proprietary pipeline we developed to train the small language models (SLMs).

Training a model with MergeKit

| Step I Start with a pre-trained open-source model, then train it on your data. | Step II Next, merge that model with another pre-trained open-source model. | Result The output "merged" model is the same size and inference cost as just one of the input models, but has the "brains" of both models. |
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| When you merge models that have be trained on the same tasks | en | Better performance and improved out-of-domain generalization |
| When you merge models that have been trained on different tasks | → | Synergistic effects can actually boost task performance above input level |

MergeKit for Enterprises

While the MergeKit library itself is a powerful resource, achieving optimal merging results requires deep expertise and precision-so we also offer a MergeKit Enterprise License (BSL) that includes direct access to our team, including the creator of MergeKit, Charles Goddard. Get in touch for licensing details.

Unlock powerful model merging with MergeKit! Follow the <u>open-source repo guide</u> and start creating smarter models today. If you're looking for a MergeKit Enterprise License (BSL), go ahead and <u>book a demo</u> with us!