Workflow Synthesis for Classification Task Based on Genetic Search and Meta-Learning Appendix B

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Importance of different tricks in the proposed approach

Table 1. Importance of meta-learning

Dataset	Without meta-learning	Random mutations	Workflow
allbp	0.7524	0.5866	**0.7726**
analcatdata-dmft	0.1592	**0.229**	0.2202
breast-cancer	0.5479	0.5566	**0.6791**
car	0.9564	**1.0**	**1.0**
connect-4	0.7264	0.725	**0.7321**
credit-g	0.6964	0.6313	**0.7023**
diabetes	0.6662	0.6687	**0.6835**
flare	0.6812	**0.6858**	**0.6858**
gina-agnostic	0.9588	0.9607	**0.9619**
heart-c	0.8476	0.8072	**0.8898**
hypothyroid	**0.8894**	0.8102	0.8746
letter	0.9475	0.9452	**0.962**
mfeat-morphological	0.7361	**0.7885**	0.7764
mfeat-zernike	0.8718	0.8557	**0.884**
pendigits	0.993	**0.9962**	0.9941
pima	0.6401	**0.6727**	0.6664
solar-flare-2	0.6013	0.5848	**0.6274**
spect	0.7486	0.7126	**0.7742**
splice	0.9537	0.9524	**0.9583**
sylva-agnostic	0.9674	0.9685	**0.9719**
tic-tac-toe	0.9678	0.9678	**0.9726**
waveform-21	0.8653	0.8596	**0.8734**
wine-quality-red	0.2883	0.3093	**0.3171**
xd6	**1.0**	**1.0**	**1.0**
yeast	0.5042	0.4936	**0.5543**

Table 2. Importance of adding classification results

Dataset	Without classifiers	Workflow
allbp	0.5945	**0.7726**
analcatdata-dmft	0.1544	**0.2202**
breast-cancer	0.5153	**0.6791**
car	0.9164	**1.0**
connect-4	0.7302	**0.7321**
credit-g	0.6531	**0.7023**
diabetes	0.6773	**0.6835**
flare	0.6454	**0.6858**
gina-agnostic	0.9608	**0.9619**
heart-c	0.8252	**0.8898**
hypothyroid	0.8025	**0.8746**
letter	0.9442	**0.962**
mfeat-morphological	0.7506	**0.7764**
mfeat-zernike	0.8221	**0.884**
pendigits	0.9935	**0.9941**
pima	0.6574	**0.6664**
solar-flare-2	0.6065	**0.6274**
spect	0.7099	**0.7742**
splice	**0.9588**	0.9583
sylva-agnostic	0.9553	**0.9719**
tic-tac-toe	**0.9818**	0.9726
waveform-21	0.8734	**0.8734**
wine-quality-red	0.3064	**0.3171**
xd6	**1.0**	**1.0**
yeast	0.4931	**0.5543**