

Raw data

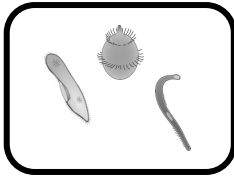
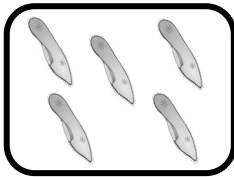
Community videos,  
aim to predict species

1. Labelling and tracking

2. ComTrack classifier

3. Secondary classifier

Single species



Aim: Accurately classifying species from ecological community videos

Old

Combination	Data	Classifier	Output classifier	Overall error	Error table																								
1  Single species data + ComTrak single species + Consensus			Consensus	25.2%	<table><tr><th>Species</th><th>Number of predictions</th><th>Test error %</th><th>Original error %</th></tr><tr><td><i>Didinium nasutum</i></td><td>1,323</td><td>0.0756</td><td>0</td></tr><tr><td><i>Paramecium bursaria</i></td><td>1,791</td><td>0.2792</td><td>100</td></tr><tr><td><i>Paramecium caudatum</i></td><td>1,032</td><td>0.4845</td><td>0</td></tr><tr><td><i>Spirostomum teres</i></td><td>1,632</td><td>0.1838</td><td>0</td></tr><tr><td><i>Stenostomum virginianum</i></td><td>1,324</td><td>0.3776</td><td>0</td></tr></table>	Species	Number of predictions	Test error %	Original error %	<i>Didinium nasutum</i>	1,323	0.0756	0	<i>Paramecium bursaria</i>	1,791	0.2792	100	<i>Paramecium caudatum</i>	1,032	0.4845	0	<i>Spirostomum teres</i>	1,632	0.1838	0	<i>Stenostomum virginianum</i>	1,324	0.3776	0
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2	Single species	ComTrak single	Random forest single	0.27%
3	Multi species	ComTrak single	Consensus	3.7%
4	Multi species	ComTrak single	Random forest single	34.2%
5	Multi species	ComTrak single	Random forest multi	1.3%
6	Multi species	ComTrak multi	Consensus	16.2%
7	Multi species	ComTrak multi	Random forest multi	<u>0.26%</u>

Raw labelled data      Single-frame classifier      Output classifier      Combination      Error rate

