A MACHINE LEARNING BENCHMARK FOR FACIES CLASSIFICATION – DETAILED RESULTS

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We present the results of our two baseline models, with other variations, when tested on either test set#1, test set#2, or both. All metrics are in the range $[0, 1]$, with larger values being better. The best performing model for every metric is highlighted in bold.

Table 1: Test set#1 results

Metric / Model	PA	Class Accuracy						MCA	FWIU
		Zechstein	Scruff	Rijnland/Chalk	Lower N. S.	Middle N. S.	Upper N. S.		
Patch-based model	0.767	0.279	0.076	0.604	0.990	0.871	0.909	0.621	0.610
Patch-based + aug.	0.812	0.473	0.222	0.774	0.978	0.911	0.944	0.717	0.678
Patch-based + aug + skip	0.815	0.418	0.283	0.723	0.974	0.906	0.941	0.708	0.681
Section-based model	0.836	0.123	0.529	0.796	0.927	0.832	0.982	0.698	0.719
Section-based + aug.	0.868	0.854	0.422	0.883	0.983	0.928	0.962	0.839	0.805
Section-based + aug + skip	0.888	0.654	0.685	0.873	0.929	0.928	0.979	0.841	0.804

Table 2: Test set#2 results

Metric / Model	PA	Class Accuracy						MCA	FWIU
		Zechstein	Scruff	Rijnland/Chalk	Lower N. S.	Middle N. S.	Upper N. S.		
Patch-based model	0.813	0.252	0.030	0.329	0.994	0.730	0.610	0.491	0.676
Patch-based + aug.	0.898	0.403	0.211	0.598	0.969	0.854	0.889	0.654	0.824
Patch-based + aug + skip	0.917	0.490	0.369	0.592	0.975	0.918	0.911	0.709	0.853
Section-based model	0.929	0.295	0.773	0.660	0.973	0.916	0.964	0.763	0.879
Section-based + aug.	0.939	0.603	0.447	0.695	0.975	0.952	0.951	0.771	0.894
Section-based + aug + skip	0.924	0.561	0.412	0.608	0.953	0.950	0.970	0.742	0.871

Table 3: Results of both test sets

Metric / Model	PA	Class Accuracy						MCA	FWIU
		Zechstein	Scruff	Rijnland/Chalk	Lower N. S.	Middle N. S.	Upper N. S.		
Patch-based model	0.788	0.264	0.074	0.499	0.992	0.804	0.754	0.565	0.640
Patch-based + aug.	0.852	0.434	0.221	0.707	0.974	0.884	0.916	0.689	0.743
Patch-based + aug + skip	0.862	0.458	0.286	0.673	0.974	0.912	0.926	0.705	0.757
Section-based model	0.879	0.219	0.539	0.744	0.951	0.872	0.973	0.716	0.789
Section-based + aug.	0.901	0.714	0.423	0.812	0.979	0.940	0.956	0.804	0.844
Section-based + aug + skip	0.905	0.602	0.674	0.772	0.941	0.938	0.974	0.817	0.832