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To the Faculty of Mathematics and Physics at Charles University, Prague,
Czech Republic:

I write this letter on behalf of Honza Miksatko, who did his Masters Thesis work ("Using Machine Learning Techniques to Analyze and Recognize Complex Patterns of Student E-Discussions") under my direction at the Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI) and the University of Saarland in Saarbrücken, Germany. I do not hesitate to strongly recommend that Mr. Miksatko receive his Masters degree from Charles University.

By way of introduction, I have a joint appointment as a research faculty member at Carnegie Mellon University in the U.S. and as a senior researcher at DFKI in Germany. The specific focus of my work is artificial intelligence, educational technology, and human learning.

Mr. Miksatko originally approached me about working on a project involving machine learning and education after hearing a lecture I gave on the topic at DFKI. The project I assigned to him, ARGUNAUT (EU Proposal/Contract No. 027728, <http://www.argunaut.org/>), involves the application of machine learning techniques to analyzing collaborative student discussions. The goal of his project was to automatically analyze student discussions, made through a visual argumentation tool, and provide a teacher with feedback on the quality of the discussions, and in particular finding interesting *clusters* of student conversation. The task required the application of both graph matching and language analysis techniques on the ARGUNAUT discussion maps.

Mr. Miksatko did extensive research in finding the right combination of techniques to apply to the problem, in particular, Query-by-Example, edit-distance, and the A* algorithms. Besides reviewing the full literature on the topic, he developed a new algorithm, DOCE (**D**etection of **C**lusters by **E**xample), based on his research and did an extensive empirical evaluation of DOCE using live data from the ARGUNAUT project. His results showed that

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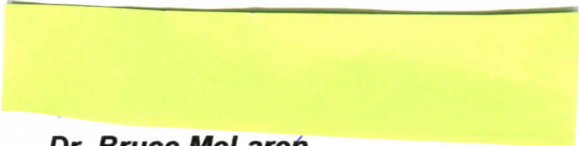
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DOCE might be a fruitful approach (although the results are preliminary). Together we wrote and submitted a research paper to the 9th International Conference on Intelligent Tutoring Systems (ITS'08) based on his thesis.

Mr. Miksatko has performed admirably during his time under my tutelage, and I do not hesitate in recommending that he receive a Masters Degree from Charles University. I believe he will one day be an excellent professional researcher, and I hope to continue working with him. Perhaps the strongest recommendation I can give is to say that I have asked Mr. Miksatko to continue working with me on a Ph.D.

Best Regards,



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