Proposal for changes to Machine Translation

Adam Lopez

February 14, 2017

1   Overview of proposed changes

The proposal is to change MT in the following ways:

Assessment from 100% coursework to 70% exam, 30% coursework.

Coursework from 3 courseworks to 1.

Points from 20 points to 10 points.

2   Background

The proposed change reverses changes implemented last year, in which the exam requirement was dropped and the course was changed to twenty points.

The removal of the exam was motivated by the argument that machine translation "is much more akin systems than theory, and the most natural way to demonstrate mastery of systems is to build them." It also included a promise to focus the course around a set of courseworks used in about ten other universities, in which students are given a set of baseline algorithms for specific problems and tasked with improving them in an open-ended way, using techniques learned in the course and applying them creatively.

The change to 20 points was made to bring the course in line with the new workload model; since the course was to be assessed only by coursework, and since it had always had at least courseworks, this change simply reflected the existing workload in the course.

3   Rationale for changes

The 20-point coursework-only version of the course has been catastrophically successful: its enrollment jumped from 37 students in 2016 to 177 in 2017. A student explained the reason for this:

> I think that the enormous increase in enrollment this year can actually be explained by the fact that the course was converted to a 20 credit course without an exam, which is quite rare. Since almost all exams are in May, a reduction of one or even two exams is quite attractive, especially as most students already have between 6 and 8 exams during that time.

Paradoxically, this situation has made it impossible to implement the open-ended coursework model, since marking the open-ended solutions is very labor intensive, and does not scale to the current enrollment. Instead, the courseworks were redesigned (at great effort) to be markable at large scale, so that each submission can be marked in 30 minutes. The courseworks are now effectively take-home exams, walking students step-by-step towards a prescribed solution; they still require 270 hours of marking support, which was difficult to recruit. In short, the current course is a failed pedagogical experiment.

Furthermore, the courseworks, which were designed in 2012, are now irrelevant. The entire field has moved to neural network models in the last two years, highlighted by the conversion of Google Translate in November 2016. Since neural networks greatly simplify the approach to building MT systems, it reasonable to reduce the number of courseworks, since there are far fewer specialized components in MT than there were five years ago.

The current lecturer has conferred with other members of staff likely to teach the course (including next year), and it was unanimously agreed that at 10-point course with one assessed coursework and an exam would be preferable.