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**Project abbreviation:** User-Focused Marian

**Project name:** User-Focused Marian

**Project coordinator:** Kenneth Heafield, UEDIN

**Project consortium:** University of Edinburgh, Unbabel Lda, Tilde SIA

**Funding:** European Commission

**Project duration:** 1 March 2020 – 28 February 2022

**Main key words:** Machine translation, forced translation, GPU efficiency, on-the-fly domain adaptation

**Goal of the project:** The Project aims at improving the pre-existing neural machine translation toolkit Marian to address the needs of CEF eTranslation and to broaden its user base

**Project abstract:** The project aims at improving the open-source neural machine translation toolkit Marian with commonly requested features: factors, forced translation, on-the fly domain adaptation from translation memories, and GPU efficiency. In particular the project aims to provide user access to text flagging by adding support for factors to support forced translation. It will also support the automated adaptation facility by adding for on-the-fly domain adaptation using large translation memories with a well-defined API. The speed improvement through increased efficiency on GPUs is planned. Finally, Marian's documentation will be improved for all levels of users.

**Publications:**

Dynamic Terminology Integration for COVID-19 and other Emerging Domains. Toms Bergmanis, Mārcis Pinnis. Proceedings of the Conference on Machine Translation at the 2021 Conference on Empirical Methods in Natural Language Processing, 2021.

Factored Models for Neural Machine Translation. Pedro Coelho. MSc thesis at Instituto Superior Técnico, 2021.

Findings of the Fourth Workshop on Neural Generation and Translation. Kenneth Heafield, Hiroaki Hayashi, Yusuke Oda, Ioannis Konstas, Andrew Finch, Graham Neubig, Xian Li, Alexandra Birch. Proceedings of the Fourth Workshop on Neural Generation and Translation, 2020.

Findings of the WMT 2021 Shared Task on Efficient Translation. Kenneth Heafield, Qianqian Zhu, Roman Grundkiewicz. Proceedings of the Conference on Machine Translation at the 2021 Conference on Empirical Methods in Natural Language Processing, 2021.

