

Nuance Communications,
Aachen, Germany

Senior Research Scientist
NLP/Machine and Deep Learning

December 2017 to September 2020

- Lead developer of sequence-to-sequence models for the Nuance DAX report generation system.

Aalto University,
Espoo, Finland

Doctoral Candidate

January 2011 to November 2017

- Worked on subword, class, and neural network language models.
- Developed [AaltoASR](#) decoder and server backend (C++).
- Developed [TheanoLM](#) language modeling toolkit (Python).
- Collected a conversational Finnish text corpus from the Internet using data selection algorithms.
- Supervised collection of an acoustic training corpus ([DSPCON](#)).

Genera Oy, Helsinki, Finland

Software Designer

May 2001 to January 2012

- Implemented new graphical features to display panel software (C++).
- Designed and developed a distributed system for updating content to KONE InfoScreen elevator displays (C++, PHP, JavaScript).
- Developed image analysis algorithms and designed computer vision systems for timber grading and internal quality control (C++).
- Developed Mitla software for timber measurement and refining (Visual Basic).
- Developed configuration script parsers for control and diagnostics panels (Perl).

- PUBLICATIONS
- Seppo Enarvi, Marilisa Amoia, Miguel Del-Agua Teba, Brian Delaney, Frank Diehl, Guido Gallopin, Stefan Hahn, Kristina Harris, Liam McGrath, Yue Pan, Joel Pinto, Luca Rubini, Miguel Ruiz, Gagandeep Singh, Fabian Stemmer, Weiyi Sun, Paul Vozila, Thomas Lin, and Ranjani Ramamurthy (2020)
[Generating Medical Reports from Patient-Doctor Conversations using Sequence-to-Sequence Models](#)
In Proceedings of the First Workshop on Natural Language Processing for Medical Conversations
- Peter Smit, Siva Reddy Gangireddy, Seppo Enarvi, Sami Virpioja, Mikko Kurimo (2017)
[Character-Based Units for Unlimited Vocabulary Continuous Speech Recognition](#)
In Proceedings of the 2017 IEEE Automatic Speech Recognition and Understanding Workshop (ASRU)
- Peter Smit, Siva Reddy Gangireddy, Seppo Enarvi, Sami Virpioja, Mikko Kurimo (2017)
[Aalto System for the 2017 Arabic Multi-Genre Broadcast Challenge](#)
In Proceedings of the 2017 IEEE Automatic Speech Recognition and Understanding Workshop (ASRU)
- Seppo Enarvi, Peter Smit, Sami Virpioja, Mikko Kurimo (2017)
[Automatic Speech Recognition with Very Large Conversational Finnish and Estonian Vocabularies](#)
IEEE/ACM Transactions on Audio, Speech, and Language Processing
- Mikko Kurimo, Seppo Enarvi, Ottokar Tilk, Matti Varjokallio, André Mansikkaniemi, and Tanel Alumäe (2017)
[Modeling under-resourced languages for speech recognition](#)
Language Resources and Evaluation (LRE)

Seppo Enarvi, Mikko Kurimo (2016)
[TheanoLM – An Extensible Toolkit for Neural Network Language Modeling](#)
In Proceedings of the 17th Annual Conference of the International Speech Communication Association (INTERSPEECH)

Seppo Enarvi and Mikko Kurimo (2013)
[Studies on Training Text Selection for Conversational Finnish Language Modeling](#)
In Proceedings of the 10th International Workshop on Spoken Language Translation (IWSLT 2013)

Seppo Enarvi and Mikko Kurimo (2013)
[A Novel Discriminative Method for Pruning Pronunciation Dictionary Entries](#)
In Proceedings of the 7th International Conference on Speech Technology and Human-Computer Dialogue (SpeD 2013)

PROGRAMMING EXPERTISE I'm especially confident in Python and C++. I've used low-level libraries such as PyTorch, TensorFlow, Theano, and NumPy extensively for modeling various tasks with neural networks. I have a long history of software development, mainly with C++ using the Standard Template Library and Boost C++ Libraries. I've used a myriad of programming languages in the past, ranging from assembly languages to Java. I have experience in concurrent programming and network programming, and I'm always keen to write aesthetic, maintainable code.

SPOKEN LANGUAGES Finnish (native), English (excellent written and spoken), German (fluent written and fair spoken), Swedish (fair)

OPEN-SOURCE CONTRIBUTIONS **TheanoLM**
Author of the open source toolkit for language modeling using neural networks.

AaltoASR
Contributed to Aalto University speech recognizer.

Tensor2Tensor
Contributed to the library of deep learning models from the Google Brain team.

Fairseq
Contributed an implementation of the Transformer model with a pointer-generator network to the sequence modeling toolkit from Facebook AI Research.

PyTorch Lightning Bolts
Contributed an implementation of the YOLO object detection model to the repository of PyTorch Lightning models.

LAST UPDATED September 6th, 2021