

Seppo Enarvi

CONTACT INFORMATION	<p>Aalto University School of Electrical Engineering Department of Signal Processing and Acoustics Otakaari 3 FI-02150 Espoo Finland</p>	<p><i>Mobile:</i> +358-44-322-5563 <i>E-mail:</i> seppo2017@marjaniemi.com <i>WWW:</i> http://senarvi.github.io/</p>
GENERAL INTERESTS	<p>All aspects of machine learning, especially deep learning. My postgraduate research has involved speech recognition and language modeling, but I have a lot of interest in computer vision as well. I have a strong background in software development and enjoy designing new algorithms. I want to learn constantly and stay on top of this fast changing field.</p>	
EDUCATION	<p>Aalto University School of Electrical Engineering, Department of Signal Processing and Acoustics, Espoo, Finland</p> <p><i>Doctor of Science (Technology)</i> September 2017 (Expected)</p> <ul style="list-style-type: none">• Research Field: <i>Automatic Speech Recognition</i>• Thesis: <i>Modeling conversational Finnish for automatic speech recognition</i> <p>Aalto University School of Science, Department of Information and Computer Science, Espoo, Finland</p> <p><i>Licentiate of Science (Technology)</i> September 2007 to September 2012</p> <ul style="list-style-type: none">• Research Field: <i>Computer and Information Science</i>• Thesis: <i>Finnish language speech recognition for dental health care</i> <p>Helsinki University of Technology, Department of Computer Science and Engineering, Espoo, Finland</p> <p><i>Master of Science (Technology)</i> September 1999 to August 2006</p> <ul style="list-style-type: none">• Major: <i>Interactive Digital Media</i>• Minor: <i>Telecommunications Software</i>• Extended curriculum in mathematics and physics• Thesis: <i>Image-based detection of defective logs</i>	
RESEARCH AND TRAINING	<p>International Computer Science Institute, Berkeley, USA</p> <p><i>Visiting Researcher</i> February 2012 to August 2012</p> <ul style="list-style-type: none">• Worked on speech recognition for conversational speech. <p>Asian Institute of Technology School of Engineering and Technology, Information and Communications Group, Pathumthani, Thailand</p> <p><i>Exchange Student</i> August 2005 to December 2005</p> <p>The Finnish Defence Forces, Guard Jaeger Regiment</p> <p><i>Military Service</i> January 2000 to December 2000</p> <ul style="list-style-type: none">• Rank: <i>Corporal</i>	

WORK HISTORY

Aalto University,
Espoo, Finland

Doctoral Candidate

January 2011 to present

- 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 December 2011

- 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).

JOKO Executive Education Oy, Helsinki, Finland

Computer Assistant

April 1999 to May 1999

June 1998 to July 1998

- Performed local area network administration.
- Produced graphic content for course material.
- Provided assistance with office software, desktop computers, and A/V equipment.

City of Helsinki Education Department, Helsinki, Finland

IT Project Tutor

January 1998 to May 1998

- Taught common desktop software to school teachers.
- Scanned photographs for [Picture Archives of Helsinki City Museum](#).

PUBLICATIONS

Seppo Enarvi, Peter Smit, Sami Virpioja, Mikko Kurimo (2017)

[Automatic Speech Recognition with Very Large Conversational Finnish and Estonian Vocabularies](#) [In Review]

IEEE/ACM Transactions on Audio, Speech, and Language Processing

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)

Mikko Kurimo, Seppo Enarvi, Ottokar Tilk, Matti Varjokallio, André Mansikkaniemi, and Tanel Alumäe (2016)

[Modeling under-resourced languages for speech recognition](#)

Language Resources and Evaluation (LRE)

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 am especially confident in C++ and Python. I've used the Standard Template Library, Boost C++ Libraries, NumPy, and Theano extensively. Other programming languages I have used in the past include Java, PHP, Perl, and assembly languages. I have experience in concurrent programming and network programming, and I am keen to write aesthetic, maintainable code.
SPOKEN LANGUAGES	Finnish (native), English (excellent written and spoken), Swedish (fluent written and fair spoken), German (fair written)
OPEN-SOURCE SOFTWARE	Author of TheanoLM , an open source toolkit for language modeling using neural networks. Contributed to AaltoASR , Aalto University speech recognizer.
LAST UPDATED	July 12th, 2017