

# Seppo Enarvi

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CONTACT INFORMATION	Aalto University School of Electrical Engineering Department of Signal Processing and Acoustics Otakaari 5 A FI-02150 Helsinki Finland	<i>Mobile:</i> +358-44-322-5563 <i>E-mail:</i> <a href="mailto:seppo2016@marjaniemi.com">seppo2016@marjaniemi.com</a> <i>WWW:</i> <a href="http://senarvi.github.io/">http://senarvi.github.io/</a>
GENERAL INTERESTS	All aspects of machine learning, especially artificial neural networks. My postgraduate research has involved speech recognition and language modeling, but I have a lot of interest in computer vision as well. I like to work with algorithms, while I have a strong background in software development. I want to learn constantly and challenge myself.	
EDUCATION	<b>Aalto University School of Electrical Engineering,</b> Department of Signal Processing and Acoustics, Espoo, Finland  <i>Doctor of Science (Technology)</i> June 2017 (Expected) <ul style="list-style-type: none"><li>• Research Field: <i>Automatic Speech Recognition</i></li><li>• Thesis: <i>Modeling conversational Finnish speech</i></li></ul> <b>Aalto University School of Science,</b> Department of Information and Computer Science, Espoo, Finland  <i>Licentiate of Science (Technology)</i> September 2007 to September 2012 <ul style="list-style-type: none"><li>• Research Field: <i>Computer and Information Science</i></li><li>• Thesis: <i>Finnish language speech recognition for dental health care</i></li></ul> <b>Helsinki University of Technology,</b> Department of Computer Science and Engineering, Espoo, Finland  <i>Master of Science (Technology)</i> September 1999 to August 2006 <ul style="list-style-type: none"><li>• Major: <i>Interactive Digital Media</i></li><li>• Minor: <i>Telecommunications Software</i></li><li>• Extended curriculum in mathematics and physics</li><li>• Thesis: <i>Image-based detection of defective logs</i></li></ul>	
RESEARCH AND TRAINING	<b>International Computer Science Institute,</b> Berkeley, USA  <i>Visiting Researcher</i> February 2012 to August 2012 <ul style="list-style-type: none"><li>• Worked on speech recognition for conversational speech.</li></ul> <b>Asian Institute of Technology School of Engineering and Technology,</b> Information and Communications Group, Pathumthani, Thailand  <i>Exchange Student</i> August 2005 to December 2005  <b>The Finnish Defence Forces,</b> Guard Jaeger Regiment  <i>Military Service</i> January 2000 to December 2000 <ul style="list-style-type: none"><li>• Rank: <i>Corporal</i></li></ul>	

PROFESSIONAL  
ACTIVITIES

**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, 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++ programming, Standard Template Library, and Boost C++ Libraries. I have many years of experience with Python and recently with NumPy and Theano. Other programming languages I have used in the past include Java, PHP, Perl, and assembly languages. I have gained experience in concurrent programming and network programming, and I am keen to write aesthetic code.
SPOKEN LANGUAGES	Finnish (native), English (excellent written and spoken), Swedish (fluent written and fair spoken), German (fair written)
SOFTWARE	Author of <a href="#">TheanoLM</a> , an open source toolkit for language modeling using neural networks. Contributed to <a href="#">AaltoASR</a> , Aalto University speech recognition software.
LAST UPDATED	September 29th, 2016