



# Luiza Sayfullina

## Curriculum Vitae

Updated: 1/06/2017

### Education

- 2015–present **Data Mining and Machine Learning**, *Aalto University*, Finland, Doctoral Student.
- 2012–2014 **Data Mining and Machine Learning**, *Aalto University*, Finland, *GPA – 4.45 out of 5.*  
Master's Diploma with Honours
- 2007–2012 **Specialist's Degree in Computer Science**, *Kazan Federal University*, Russia, *GPA – 5 out of 5.*  
Specialized in Math Optimization, Diploma with Honours

### Fields of interest in Machine Learning

- Deep Learning
- Semi-supervised and transfer learning
- Android Malware Classification
- Word and Sentence embeddings

### Master's Thesis

- Title Reducing Sparsity in Sentiment Analysis Data using Novel Dimensionality Reduction Approaches
- Supervisors Professor Juha Karhunen & D.Sc. Yoan Miche
- Description Thesis proposes new dimensionality reduction techniques for solving sentiment analysis problems, including word clustering and supervised tf-idf feature scoring. Proposed dimensionality reduction techniques were shown to be beneficial for Sentiment Classification using Extreme Learning Machines.

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🌐 <http://users.ics.aalto.fi/sayfull1/>

Doctoral student, Aalto University, Finland

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## Experience

### Data Mining and Machine Learning

Summer 2013 **Trainee**, *Aalto University*, Finland.

and 2014 Detailed achievements:

- Summer
  - Developed Web application dealing with Facebook API for gathering sentiment analysis data
  - Investigated methods for detecting person's outlier behaviour
  - Wrote summary on outlier detection methods
  - Worked on Sentiment Analysis in Twitter, using Extreme Learning Machines
  - Investigated Dimensionality Reduction methods for Sentiment Analysis

October **Research Assistant**, *Aalto University*, Finland.

2013-May Detailed achievements:

- 2014
  - Investigated Sentiment Analysis methods for Twitter data
  - Tried Deep Learning for Sentiment Analysis
  - Compared the performance of Extreme Learning Machines with Naive Bayes for Sentiment Classification

October 2011- **Web programming in Online-tutors**, *PHP programmer*, Kazan, Russia.

March 2013 Detailed achievements:

- Developing web-sites for online-education
- Web-store for selling ebooks / Azbuka Ltd
- Used languages and technologies: PHP > 5, jQuery, CSS 3, MySQL 5, Svn&Git
- Worked both on the client and server-side

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## Activities and awards

- 2017 Vision and Sports Summer School, Prague
- 2016 Deep Learning Summer School, Montreal, Canada
- 2015 Machine Learning Summer School, Tübingen, Germany
- 2014 Smart Ways of Being Inexact, Soft Computing school, Stockholm, KTH
- 2013 Microsoft School on ALgorithms for MAssive DAta, Moscow, Russia
- 2013 The 7th Russian Summer School in Information Retrieval, Kazan, Russia
- 2011 Cambridge Enterprisers programme, Moscow
- 2010 Exchange Student, Computer Science Department, Helsinki University
- 2009 Won the scholarship for exchange studies in Helsinki University
- 2007 Regional Math KFU Olympiad, II and III places, Kazan, Russia

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## Teaching

- 2016-2017 AIHelsinki Academia study group organizer
- 2016 Course assistant "T.61-6050. Special course on Deep Learning"
- 2015 Research project instructor "T-61.5910 Research Project Course"
- 2014 Course assistant for "Information Visualization"
- 2014 Course assistant for "T-61.6090 Special Course in Language Technology"
- 2014 Student ambassador programme

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🎓 *Doctoral student, Aalto University, Finland*

## Funding

- June 2014 - CloSe project, Academy of Finland, led by Prof. Asokan (participation in preparing the proposal)  
June 2016  
July 2016 - CS Department funding, Juha Karhunen's funding  
July 2018

## Publications

Luiza Sayfullina, Emil Eirola, Dmitry Komashinsky, Paolo Palumbo and Juha Karhunen. *Android Malware Detection: Building Useful Representation*, To be published in Conference Proceedings of IEEE ICMLA. 2016.

Luiza Sayfullina, Mark van Heeswijk, *Fixing random weight initialization as the form of regularization*, NIPS WiML workshop, 2016.

Luiza Sayfullina, Emil Eirola, Dmitry Komashinsky, Paolo Palumbo, Yoan Miche, Amaury Lendasse and Juha Karhunen. *Efficient detection of zero-day Android Malware using Normalized Bernoulli Naive Bayes*, In Trustcom/BigDataSE/ISPA, 2015 IEEE, volume 1, pages 198-205. 2015.

Luiza Sayfullina, Kaj-Mikael Björk, Magnus Westerlund and Hannu Toivonen. *HP Trend Filtering Using Gaussian Mixture Model Weighted Heuristic*, In Conference Proceedings of IEEE International Conference on Tools with Artificial Intelligence, 2014

*Web application for searching and selling e-books using Data Mining Technology*, Bachelor's Thesis, 2012

*Detalization of Vector Space Model for XML Information Retrieval*, Kazan Federal University student conference proceedings, 2011

## Languages

- English **Fluent, TOEFL iBT:100**  
Finnish **B2**  
Russian **Mother tongue**

## Programming skills

- |          |  |
|----------|--|
| - Matlab | - Python 2.7 (preferred for my research) |
| - Theano | - TensorFlow                             |
| - PHP 5  | - jQuery                                 |
| - C#     | - C++                                    |
| - HTML 5 | - CSS 3                                  |

## Interests

- |                              |               |
|------------------------------|---------------|
| - Practical psychology       | - Swimming    |
| - Creative & healthy cooking | - Photography |

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