Luiza Sarzyniec (Orosanu)
PhD in computer science

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Research & Development Experience

Nov 2017 - Present

Machine Learning Engineer, Qwant
Epinal, France

Automatic query correction for the Qwant European search engine. Handle the detection and correction of isolated non-word and in-context real word errors.

- minimum edit distance, word embeddings, sequence-to-sequence learning
- Python, Shell, Git, GitLab, Docker, Linux

Oct 2016 - Oct 2017

Machine Learning Engineer, Xilopix
Epinal, France

Knowledge extraction for the Xaphir search engine. The text classification project allowed making a demonstration of the engine on sports-related subjects. The neural network approach for the detection of main colors in images improved the engine's filter by color results.

- corpus building, data processing, word embeddings, classification, neural networks
- Python, Ruby, Shell, Git, Gerrit, Docker, Elasticsearch, Linux

Dec 2012 - Feb 2016

PhD student, Inria, RAPSODIE project
Nancy, France

Speech recognition to help communication with hearing impaired people. Proposed the combination of words and syllables into a hybrid model. Used the similarity between words to add new words into the model. Classified questions and statements using prosodic and linguistic features.

- hybrid language models, similar words, question detection
- Perl, Shell, Gnuplot, LaTeX, Git, distributed computations, Linux

Oct 2011 - Nov 2012

Junior Engineer, Inria, ALLEGRO project
Nancy, France

Speech recognition for second language learning. Studied the detection of incorrect entries (text does not correspond to the associated speech signal). Compared the phonemes, phoneme durations, non-speech segments and likelihood ratios between the forced alignment and the phonetic decoding.

- non-native speech, text-to-speech alignment, logistic regression
- Perl, Shell, Gnuplot, LaTeX, Linux

Feb 2011 - June 2011

Intern, Université de Lorraine
Nancy, France

Speech recognition with remote sound for home automation. Tested different configurations, decoding settings, acoustic and language models in order to determine the setup leading to optimal performance.

- remote sound, model adaptation, optimal setting
- Perl, Java, Shell, Linux

Feb 2010 - June 2010

Intern, Universitatea Stefan cel Mare
Romania

Recognition of head movements for the gestural control of video games. The experiment involved using a Wii remote that tracks the head position through glasses equipped with IR LEDs. Evaluation with 10 student volunteers.

- movement detection, Wii remote, infrared sensors
- C#, Microsoft Visual Studio, Windows

Administrative Experience

Feb 2014 - Aug 2015

Responsible of the international network
Nancy, France

Organize meetings and activities in order to facilitate the integration of foreigners working at Inria. Assist with administrative procedures.

Education

Dec 2012 - Dec 2015

PhD in computer science
Nancy, France

Université de Lorraine, Inria

2010 - 2011

Master of research in computer science
Nancy, France

Université de Lorraine

2006 - 2010

Bachelor's degree in computer science
Romania

Universitatea Stefan cel Mare

Computer Skills

Machine Learning
Logistic regression, decision trees, n-gram language model, word embedding, neural networks

Programming languages
Python *(numpy, pandas, gensim, sklearn, spacy, fasttext, keras, matplotlib, jupyter)*, Ruby, Perl, Shell Script, Java, C/C++, C#

Database
SQL, MongoDB, Elasticsearch

Quality assurance
Git, Jenkins, Gerrit, GitLab, Docker

Operating systems
Linux, Windows

Programming challenges

ACM-ICPC (acm.ro)
International programming contest
Romania - 2008, 2009

Scientific contributions

11 articles, PhD thesis

Language skills

English, French: fluent
Romanian: native

Additional information

Interests
Data science, machine learning
Explore new horizons, take long walks
TV-shows, video games, board games

Gallup strengths
Restorative, Adaptability, Deliberative, Relator, Empathy

B driving license