

PAVOL HARAR

PHD STUDENT @ BRNO UNIVERSITY OF TECHNOLOGY

STIPENDIARY @ NUHAG, UNIVERSITY OF VIENNA

WORKING ON DEEP LEARNING FOR VOICE AND TIME SERIES ANALYSIS

RESEARCH INTERESTS

- Analysis of pathological voices with deep learning
- Exploration of novel time-frequency representations
- Investigation of new preprocessing steps for learning algorithms

EDUCATION

DOCTORAL DEGREE

2015 - present

Program: Teleinformatics

Thesis: Deep Learning Methods for Voice Pathology Assessment

Supervisor: Assoc. Prof. Radim Burget

Faculty: Faculty of Electrical Engineering and Communications

Organization: Brno University of Technology (BUT)

MASTER'S DEGREE

2012 - 2015

Program: System Management and Informatics

Thesis: Social Tags Prediction Using Data Mining

Supervisor: Ing. Jiří Kříž Ph.D.

Faculty: Faculty of Business and Management

Organization: Brno University of Technology (BUT)

SKILL KEYWORDS:

Python, Java, Numpy, Pandas, Scikit-learn, SciPy, Keras, Tensor-Flow, Linux, Docker

PUBLICATIONS

- 2018 Journal article
Harar, Pavol, et al. "Towards robust voice pathology detection." *Neural Computing and Applications* (2018): 1-11. <https://doi.org/10.1007/s00521-018-3464-7>
- 2018 Journal article
Hájek, V., Harár, P., Schimmel, J. and Burget, R. "BUT-CZAS – Database of Czech anechoic speech." *Elektrorevue* 20.2 (2018) 48-52. <http://splab.cz/en/download/databaze/but-czas>
- 2017 Conference paper (Selected for Special Issue)
Harar, Pavol, et al. "Voice pathology detection using deep learning: a preliminary study." *Bioinspired Intelligence (IWOBi), 2017 International Conference and Workshop on*. IEEE, 2017.
- 2017 Conference paper
Harar Pavol, Radim Burget, and Malay Kishore Dutta. "Speech emotion recognition with deep learning" *Signal Processing and Integrated Networks (SPIN), 2017 4th International Conference on*. IEEE, 2017.
- 2017 Software
Harar: KEX. <https://gitlab.com/paloha/kex>, accessed: 2017-04-04.
- 2016 Conference paper
Vyas, Garima, et al. "An automatic diagnosis and assessment of dysarthric speech using speech disorder specific prosodic features" *Telecommunications and Signal Processing (TSP), 2016 39th International Conference on*. IEEE, 2016.

TEACHING

- 2017 Supervising Bachelor thesis of Vojtěch Hájek @ BUT
Creating a database of audio recordings with artificial noise in an anechoic chamber
- 2017 13 weeks x 2 hours x 3 groups x 30 undergraduate students @ BUT
Basics of Object Oriented Programming in Java
Awarded: Best teacher at Department of Telecommunications in 2017
- 2017 15 weeks x 2 hours x 30 ladies @ PyLadies Brno
Coaching at public course focusing on helping more woman become active participants and leaders in the Python open-source community
- 2016 Supervising Diploma thesis of Martin Majtán @ BUT
Trainable image segmentation using deep neural networks
- 2016 13 weeks x 2 hours x 4 groups x 30 undergraduate students @ BUT
Basics of Object Oriented Programming in Java

ATTENDED WORKSHOPS

- 2018 (3 days), Mathematical challenges of structured function systems @ ESI, UNIVIE
- 2017 (3 days), Machine Learning Weekend @ KIWI.com
- 2017 (5 days), Systematic approaches to deep learning methods for audio @ ESI, UNIVIE
- 2016 (3 days), Python Weekend @ KIWI.com
- 2016 (1 day), Code Retreat by Seznam.cz @ BUT

GIVEN PRESENTATIONS

- 2018 Poster presentation "Towards Robust Voice Pathology Detection" @ Strobl18
- 2018 (3 hours) Workshop "Battle-proven machine learning workflow from venv to dockerizatoin" @ Brno University of Technology
- 2017 (1 hour) Private presentation "How to train fox's brain to predict the future" @ Mergado DevTalks, Brno
- 2017 (30 min), Invited talk "Voice Pathology Detection Using Deep Learning: a Preliminary Study" @ Systematic approaches to deep learning methods for audio workshop organized by Monika Dörfler & Arthur Flexer, ESI, University of Vienna
- 2017 (1 month) Internship @ University of Las Palmas De Gran Canaria, Spain, supervised by Jesus B. Alonso-Hernandez

MOBILITY

Duration: 1 year (April 2018 - March 2019)
Organization: Numerical Harmonic Analysis Group, University of Vienna, Austria
Supervisor: Monika Dörfler

Duration: 1 month (Jan 2017 - Feb 2017)
Organization: University Of Las Palmas De Gran Canaria, Spain
Supervisor: Jesus B. Alonso-Hernandez

LANGUAGES

- Native in Slovak & Czech
- Advanced English (C1)
- Beginner level of French and German (A1)

STATUS

- Married, one child