



Dénes-Fazakas Lehel

Date of birth: 25/02/1996 | **Nationality:** Hungarian, Romanian | **Gender:** Male |

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<https://github.com/dflehel> | **Website:**

<https://www.researchgate.net/profile/Lehel-Denes-Fazakas> | **Website:**

<https://scholar.google.com/citations?user=572V5bAAAAAJ&hl=hu> | **LinkedIn:**

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Address: str.Sporturilor nr.3 bl.1, 18, 520076, Sfantu Gheorghe, Romania
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WORK EXPERIENCE

20/04/2017 – 03/06/2017 Târgu Mureş, Romania
IOS INTERN DEVELOPER LYNX SOLUTION

Game developing offline and online mode.

Game Center and Gamekit have used creating a connection to online mode.

01/05/2018 – 30/11/2018 Târgu Mureş, Romania
RESEARCH MANAGER ACCENTURE

Accenture research scholarship tender
Project: Detecting Unauthorized Account Usage by Mouse Dynamics

15/07/2019 – 09/08/2019 Timisoara , Romania
INTERN MACHINE LEARNING RESEARCHER S.C. INTEL SOFTWARE DEVELOPMENT S.R.L.

Developing Object Tracking algorithm using Open CV and scikit learn.

01/03/2020 – CURRENT Budapest, Hungary
ARTIFFICIAL INTELLIGENT RESEARCHER ÓBUDA UNIVERSITY UNIVERSITY RESEARCH AND INNOVATION CENTER

Developing artificial intelligence models in medical science

15/12/2021 – CURRENT Budapest, Hungary
ASSISTANT LECTURER IN UNIVERSITY ÓBUDA UNIVERSITY

30/08/2021 – CURRENT Targu Mures, Romania
ASSISTANT LECTURER IN UNIVERSITY SAPIENTIA HUNGARIAN UNIVERSITY OF TRANSILVANIA

01/09/2023 Budapest, Hungary
PHD STUDENT REPRESENTATIVE OF THE DOCTORAL SCHOOL OF APPLIED INFORMATICS AND APPLIED MATHEMATICS ÓBUDA UNIVERSITY

● EDUCATION AND TRAINING

01/02/2021 – CURRENT Budapest, Hungary
PHD DOCTOR OF PHILOSOPHY Óbuda University

Field of study Applied Informatics and Applied Mathematics

01/09/2019 – 26/01/2021 Budapest, Hungary
MSC MASTER OF SCIENCE Óbuda University

Field of study Computer science specialization Cyber Medical

14/09/2015 – 04/07/2019 Târgu Mureș, Romania
BSC BACHELOR OF SCIENCE Sapientia Hungarian University of Transylvania

Field of study Computer science

15/09/2011 – 15/06/2015 Sfântu Gheorghe, Romania
HIGH SCHOOL EDUCATION Reformed College

Field of study Mathematic Informatic

15/09/2007 – 15/06/2011 Sfântu Gheorghe, Romania
SECONDARY SCHOOL Reformed College

15/09/2003 – 15/06/2007 Sfântu Gheorghe, Romania
PRIMARY SCHOOL Szekely Mikó College

27/07/2015 – 21/07/2017 Gyula, Hungary
LEADERSHIP TRAINING South Plains Tallentum Academy

14/09/2015 – 03/06/2018 Târgu Mureș, Romania
LEVEL I ENGINEERING TEACHER Sapientia Hungarian University of Transylvania

● LANGUAGE SKILLS

Mother tongue(s): **HUNGARIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ROMANIAN	C1	C1	C1	C1	C1
ENGLISH	C1	C2	C1	C1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● ADDITIONAL INFORMATION

PUBLICATIONS

[User Verification Based on Mouse Dynamics: a Comparison of Public Data Sets](#) – 2019

M. Antal and L. Denes-Fazakas, "User Verification Based on Mouse Dynamics: a Comparison of Public Data Sets," *2019 IEEE 13th International Symposium on Applied Computational Intelligence and Informatics (SACI)*, 2019, pp. 143-148, doi: 10.1109/SACI46893.2019.9111596.

[Two-factor, continuous authentication framework for multi-site large enterprises](#) – 2020

L. Déncs-Fazakas, E. Kail and R. Fleiner, "Two-factor, continuous authentication framework for multi-site large enterprises," *2020 IEEE 20th International Symposium on Computational Intelligence and Informatics (CINTI)*, 2020, pp. 173-178, doi: 10.1109/CINTI51262.2020.9305817.

Detection of physical activity using machinelearning methods – 2020

L. Dénes-Fazakas, L. Szilágyi, J. Tasic, L. Kovács and G. Eigner, "Detection of physical activity using machine learning methods," *2020 IEEE 20th International Symposium on Computational Intelligence and Informatics (CINTI)*, 2020, pp. 167-172, doi: 10.1109/CINTI51262.2020.9305845.

Effect of spectral resolution on the segmentation quality of magnetic resonance imaging data – 2022

Á. Gyórfi *et al.*, "Effect of spectral resolution on the segmentation quality of magnetic resonance imaging data," *2022 IEEE 26th International Conference on Intelligent Engineering Systems (INES)*, 2022, pp. 000053-000058, doi: 10.1109/INES56734.2022.9922634.

Segmentation of 6-month infant brain tissues from multi-spectral MRI records using a U-Net neural network architecture

– 2022

L. Dénes-Fazakas, G. Eigner and L. Szilágyi, "Segmentation of 6-month infant brain tissues from multi-spectral MRI records using a U-Net neural network architecture," *2022 IEEE 10th Jubilee International Conference on Computational Cybernetics and Cyber-Medical Systems (ICCC)*, 2022, pp. 000077-000082, doi: 10.1109/ICCC202255925.2022.9922800.

Utilization of IMU-Based Gesture Recognition in the Treatment of Diabetes – 2022

M. Szántó *et al.*, "Utilization of IMU-Based Gesture Recognition in the Treatment of Diabetes," *2022 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR)*, 2022, pp. 1-5, doi: 10.1109/AQTR55203.2022.9801950.

Uninorm-like parametric activation functions for human-understandable neural models – 2022

Csiszár, O., Pustaházi, L. S., Gashler, M. S., Kreinovich, V., & Csiszár, G. (2022). Uninorm-like parametric activation functions for human-understandable neural models. *arXiv*. <https://doi.org/10.48550/arXiv.2205.06547>

Identifying the most suitable histogram normalization technique for machine learning based segmentation of multispectral brain MRI data

– 2021

A. Kőble *et al.*, "Identifying the most suitable histogram normalization technique for machine learning based segmentation of multispectral brain MRI data," *2021 IEEE AFRICON*, 2021, pp. 1-6, doi: 10.1109/AFRICON51333.2021.9570990.

Detection of Physical Activity Using Machine Learning Methods Based on Continuous Blood Glucose Monitoring and Heart Rate Signals

– 2022

Dénes-Fazakas, L., Siket, M., Szilágyi, L., Kovács, L., & Eigner, G. (2022). Detection of Physical Activity Using Machine Learning Methods Based on Continuous Blood Glucose Monitoring and Heart Rate Signals. *Sensors*, 22(21).

Control of Type 1 Diabetes Mellitus using direct reinforcement learning based controller – 2022

Lehel, D.-F., Máté, S., Gábor, K., & László, S. (2022). Control of Type 1 Diabetes Mellitus using direct reinforcement learning based controller. In *2022 IEEE International Conference on Systems, Man, and Cybernetics (SMC)* (pp. 1504–1509).

Numba-accelerated parameter estimation for artificial pancreas applications – 2022

Maté Siket, Lehel Dénes-Fazakas, Levente Kovács, György Eigner
IEEE 20th Jubilee International Symposium on Intelligent Systems and Informatics (SISY 2022)
Szabadka, Szerbia : IEEE (2022) 457 p. pp. 279-284. , 6 p.

Physical Activity Detection Using Machine Intelligence: ATTD 2021 Invited Speaker Abstracts – 2021

TTD 2021 Invited Speaker Abstracts

(2021) *Diabetes technology & therapeutics*, 23 (S2), pp. A1 - A206, Cited 3 times.

DOI: 10.1089/dia.2021.2525.abstracts

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85107398856&doi=10.1089%2fdia.2021.2525.abstracts&partnerID=40&md5=7207659982e718f105a501f19f33701d>

DOCUMENT TYPE: Article

PUBLICATION STAGE: Final

SOURCE: Scopus

[Investigation of reward functions for controlling blood glucose level using reinforcement learning](#) – 2023

10.1109/SACI58269.2023.10158621

[Which Activation Function Works Best for Training Artificial Pancreas: Empirical Fact and Its Theoretical Explanation](#)

– 2023

[Why Bump Reward Function Works Well In Training Insulin Delivery Systems](#) – 2023

CONFERENCES AND SEMINARS

17/11/2020 – Óbuda University

52. Academic Student Conference Óbuda University Neumann János Faculty Topic: THE PHYSICAL ACTIVITY OF THE DIABETIC PATIENT IS ARTIFICIALLY INTELLIGENCE.

29/04/2020

51. Academic Student Conference Óbuda University Neumann János Faculty Topic: Physical activity detection with machine learning

12/11/2019

50. Academic Student Conference Óbuda University Neumann János Faculty Topic: Physical activity detection with machine learning

02/05/2019 – 05/05/2019

A XX. Műszaki Tudományos Diákköri Konferencia (MTDK 2019) Topic: Mouse Dynamics Intrusion Detection System

12/04/2019 – 13/04/2019

XVIII Sapientia Hungarian University of Transylvania Faculty of Science Students of Târgu Mureş Conference Topic: Mouse Dynamics Intrusion Detection System

13/04/2018 – 14/04/2018

XVII Sapientia Hungarian University of Transylvania Faculty of Science Conference Topic: Detect unauthorized use based on mouse movement.

PROJECTS

01/02/2018 – 18/12/2018

Accenture Research Scholarship tender Topic: Detect unauthorized use based on mouse movement .

01/03/2020 – CURRENT

Establishment of an innovation service base for cybermedicine for diagnostic, therapeutic and research development of systems Creating artificial intelligence models

HONOURS AND AWARDS

03/11/2021

New National Excellence Programme – Hungarian Ministry of Innovation and Technology

03/11/2020

New National Excellence Programme – Hungarian Ministry of Innovation and Technology

03/11/2020

National Higher Education Scholarship – Hungarian Ministry of Innovation and Technology

30/11/2020

Faculty Creative Award Óbuda University – Óbuda University Scientific Student Council

29/06/2019

Certificate of Appreciation for outstanding academic, professional and scientific activities – Sapientia Hungarian University of Transylvania, Faculty of Târgu Mureş

03/11/2022

New National Excellence Programme – Hungarian Ministry of Innovation and Technology

01/09/2023

New National Excellence Programme – Ministry of Culture and Innovation

ORGANISATIONAL SKILLS

Organizing skills I was a member of the Youth Christian Association for 13 years. I led our group for six years.

Furthermore, during my university years I helped my fellow students learn electronics, programming, mathematics. I led a six-man team at the Red Cross. The football team in our department elected captain.

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills I have very good communication skills.

WORK-RELATED SKILLS

Work-related skills

Known programming languages : Turbo Pascal, C, C++, Java, Swift, Matlab, Haskell, VHDL, Kotlin, Python, C#, R.

Database skills: Oracle SQL, MY SQL, MS SQL, Redis, Cassandra,

Known frameworks: QT, Angular.

Big Data: Hadoop, Spark, Kafka, Hive, Hbase, Flume.

Machine learning, Deep learning: Scikit-learning, Tensorflow, Pandas, Numpy.

Cloud provider: Google Cloud Platform.

Image processing: OpenCV

ADDITIONAL SKILLS

Additional Skills

- First aid: First aid studied at the Red Cross in Covasna County.

- Sport: I like to play sports especially football and orienteering. During my study period at competitive level I swam and athletic.

- Volunteering: I like volunteering. Red Cross and the Youth Christian Association I volunteered.

COURSE

30/01/2019

Stanford University online Machine Learning course

30/08/2019

NVIDIA Deep Learning Institute

Fundamentals of deep learning for computer vision

07/07/2021 – 15/07/2021

Eastern European Machine Learning Summer School

Deep Learning and Reinforcement Learning

18/02/2022

Tensorflow 2.0: Deep Learning and Artificial Intelligence

TRAINING

16/05/2015

Church Baccalaureate

06/04/2015

Computer science

Budapest , 18/10/2023



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