

Le Duc Khai

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Education

RWTH Aachen University <i>Bachelor thesis student at Department of Computer Science</i>	2022 <i>Aachen, Germany</i>
FH Aachen - Aachen University of Applied Sciences <i>B.Eng Biomedical Engineering</i>	2022 <i>Jülich, Germany</i>
Vietnam National University Ho Chi Minh City - University of Economics and Law <i>B.Ecs International Economic Relations</i>	2016 <i>Ho Chi Minh City, Vietnam</i>

Research Experience

Student Research Assistant <i>Human Language Technology and Pattern Recognition Group, RWTH Aachen University</i>	05.2021 – Present <i>Aachen, Germany</i>
<ul style="list-style-type: none">• Supervisor: Prof. Hermann Ney (h-index 113) and Ralf Schlüter (h-index 48)• Research interests: Automatic Speech Recognition, Semi-supervised Learning, Acoustic Modelling• Tasks: Efficient training and implementation of semi-supervised learning wav2vec 2.0 acoustic model on low-resource language in a hybrid DNN-HMM system• Performance: Reduce WER by 22% compared to the Transformer supervised-only baseline• Novelties: Propose a data combination method for unsupervised pretraining on out-of-domain data	

Selected Publications

1. C. Lüscher, M. Zeineldeen, Z. Yang, P. Vieting, **K. Le-Duc**, W. Wang, R. Schlüter, and H. Ney. Development of Hybrid ASR Systems for Low Resource Medical Domain Conversational Telephone Speech. , October, 2022. Submitted to ICASSP 2023.
2. C. Lüscher*, M. Zeineldeen*, Z. Yang*, P. Vieting*, **K. Le-Duc***, J. Dierkes*, W. Wang, R. Schlüter, and H. Ney. Rapid Development of ASR Systems for Low Resource Medical Domain Conversational Telephone Speech. , July, 2022. Rejected in SLT 2023.

Awards & Honors

Top 12 HackerRank in Germany <i>HackerRank</i>	2020
Valedictorian Scholarship of Vietnam National University Ho Chi Minh City <i>Vietnam National University Ho Chi Minh City</i>	2015

Specialized Skills

Programming Skills: Python, MATLAB, Linux, Tensorflow
Spoken Languages: Vietnamese, English, German

Selected Open-source Projects

Awesome Competitive Programming Problems:

- Implementation of useful / well-known data structures, algorithms and solutions for awesome competitive programming problems in Hackerrank, Project Euler and Leetcode.
- Received 168 stars until November 2022.

Segment White Blood Cell Nuclei:

- An algorithm used for white blood cell nuclei segmentation.
- Received 10 stars until November 2022.