

# AHMED ENDRIS HASEN

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## Summary:

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- A Doctoral Researcher at the AI-DOC program, at the University of Jyväskylä. Highly motivated and dedicated student with a strong academic background and a genuine passion for advancing the field of AI for different application areas. Experienced in leveraging machine learning and deep learning algorithms to develop methods for computer vision tasks like Object Detection, Tracking, Pose Estimation and Motion Analysis.
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## Research Focus:

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- Deep Learning, Computer Vision, 3D Reconstruction, Motion Analysis, and Tracking
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## Education:

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- University of Jyväskylä, Doctoral Researcher in Computer Science and Engineering Major (2024 – 2027)
    - **Research Topic:** Deep Learning Algorithms for Motion Tracking and Analysis
  - University of Electronic Science and Technology of China (UESTC) Master's Degree in Information and Software Engineering, 2021 – 2023, CGPA (3.99/4)
    - **Relevant Coursework:** Neural Network and Machine Learning, Computer vision, Data Science and Application, Cloud Computing, Matrix Theory, Database and Numerical Analysis, etc.
    - **Research Topic:** Attention Guided Improved YOLOX Algorithm for Blood cell Detection.
  - University of Electronic Science and Technology of China (UESTC): Bachelor Degree in Software Engineering, 2017 – 2021, CGPA (3.87/4)
    - **Relevant Coursework:** Artificial Intelligence, Probability, Calculus, Linear Algebra, Discrete Mathematics, Physics, Java, Database System, Multimedia Application, System Design, Data Structure and Algorithms, Multimedia Application, Management and Data Mining etc.,
    - **Research Topic:** Automated Monitoring of Ethiopian Endemic Species Using Deep Learning
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## Experience:

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- **Doctoral Researcher and AI Engineer** – at the AI-DOC, at the University of Jyväskylä (2024 – now)
  - Deep Learning Algorithms for Object Detection, Tracking, and Motion Analysis in Sports
  - Hammer Throw Distance Estimation using Deep Learning and Physics-Based Modeling for indoor training where manual physical measurement is not possible, Football Headshot Analysis (my latest work).
- **Research Assistant** – at Shenzhen Institute of Advanced Technology (SIAT) (01. 2024 – 06. 2024)
  - Deep learning algorithms for Medical Image Detection and Segmentation.

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## Key Skills:

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### Skills:

Programming Language (Python, C, R)  
 PyTorch, TensorFlow, Pandas, NumPy, Scikit-learn  
 FastAPI, Rest API, Flask, Docker, Git, AWS, Heroku  
 Excel, Tableau, SQL, MySQL  
 HTML, CSS, JavaScript, React, Node.js  
 Agentic AI, LangChain and n8n  
 Annotation Tools (CVAT, Roboflow, LabelImg)

### Soft Skills:

Problem solving  
 Project and Teamwork  
 Good communication  
 Critical thinking  
 Time Management  
 Research Writing,

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## Research Outputs:

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1. **Hasen, A.E.**, Passalis, N., Vánttinen, T. and Raitoharju, J., 2026. Hammer Throw Distance Estimation Using Deep Learning and Physics-Based Modeling. *Expert Systems with Applications*, p.132022.
  2. **A. Endris**, Yang. S, *et al.*, "Efficient Face Mask Detection Method Using YOLOX: An Approach to Reduce Coronavirus Spread," *2022 5th International Conference on Pattern Recognition and Artificial Intelligence (PRAI)*, 2022, pp. 568-573, doi: 10.1109/PRAI55851.2022.9904262.
  3. **A. Endris**, Zakria, J. Deng, M. Ahmednasir, J. Mohammed and N. Kewyu, "Towards Automatic Ethiopian Endemic Animals Detection on Android Using Deep Learning," *2021 4th International Conference on Pattern Recognition and Artificial Intelligence (PRAI)*, 2021, pp. 463-468, doi: 10.1109/PRAI53619.2021.9550798.
  4. **A. Endris**, Yang. S, *et al.*, 2024. "An Improved YOLOX Using Attention Guiding for Blood Cell Detection". *Biocybernetics and Biomedical Engineering*. (arxiv)
  5. Y. A. Zenebe, L. Xiaoyu, W. Chao, W. Yi, **H. A. Endris** and M. Natnael Fanose, "Towards Automatic 2D Materials Detection Using YOLOv7," *2022 19th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP)*, Chengdu, China, 2022, pp. 1-5. doi: 10.1109/ICCWAMTIP56608.2022.10016569.
  6. Y. A. Zenebe, L. Xiaoyu, W. Yi, **A. Endris**, "Skin Lesion Classification Based on Attention Augmented Deep Neural Networks," *2023 7th International Conference on Computer Science and Artificial Intelligence (CSAI 2023)* (Accepted)
  7. L. Yobsan, W. Wang, C. Ukwuoma, H. Kebede, **A. Endris**, T. Abu, "Unified Deep Learning Model for Multitask Representation and Transfer Learning: Image Classification, Object Detection, and Image Captioning," *International Journal of Machine Learning and Cybernetics*, 2024
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## Presentation:

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- Paper presentation at the 4<sup>th</sup> International Conference on Pattern Recognition & Artificial Intelligence (PRAI 2021)
  - Paper presentation at the 5<sup>th</sup> International Conference on Pattern Recognition & Artificial Intelligence (PRAI 2022)
  - Project Presentation at Tsinghua University, Innovation and Entrepreneurship program organized by Tsinghua University on April 22, 2023.
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## Some of my Latest Projects :

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- Hammer Throw Distance Estimation using Deep Learning and Physics-Based Modeling for indoor training where manual physical measurement is not possible, and Football Headshot Analysis
  - Object Tracking and Counting in production and manufacturing: This project is about detecting, tracking and counting any objects in videos footage.
  - Pose Estimation and Analysis for Squat and Skating Sports: A real time pose estimation using YOLO and MediaPipe with visual feedback and performance analysis.
  - Brain Tumor Segmentation using U-NET in MRI Images: This project involves using a U-Net to accurately segment brain tumors from MRI images for medical diagnosis.
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## Certifications:

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- Deploy ML Model in Production with FastAPI and Docker, 2025 (Udemy)
  - Data Analysis Fundamentals, Nanodegree Course, Udacity, Issued Aug 2024
  - Prompt Engineering, 2025 (DUBAI FUTURE FOUNDATION)
  - AI Automation: Build LLM Apps & AI-Agents with n8n & APIs, 2025 (Udemy)
  - The First Scientific Innovation training camp organized by SICE, UESTC in May-Sep 2022.
  - Participation in Life, Academics and Research (LAR): The Publication Cycle Seminar, UESTC
  - Deep Learning with PyTorch for Medical Image Analysis, Udemy Course, 2023
  - Data Analyst II certified by Enterylevel Program, in Aug - Oct 2022.
  - Deep Learning and Android APP Development summer workshop in UESTC.
  - Deep Learning for Image Segmentation with Python and PyTorch, Udemy Course, 2023
  - Participation in Summer Personal Development workshop: Build Your Skills, Knowledge and Abilities (SKAs), UESTC, 2018
  - Participation in Tsinghua University Innovation and Entrepreneurship program in Mar - Apr 2022.
  - Presentation at the 4<sup>th</sup> and 5<sup>th</sup> International Conference on Pattern Recognition and Artificial Intelligence (PRAI 2021 and PRAI 2022)
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## Award, Honor and Scholarship Won:

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- ✚ Won second prize of the Academic Achievement award for achievements in the field of academic research in the academic year 2022 at UESTC, Chengdu, China
- ✚ Won second prize of the Academic Achievement award for achievements in the field of academic research in the academic year 2018-2020 at UESTC, Chengdu, China
- ✚ The 2021 Chinese Bridge Online Dubbing Competition of Chinese Proficiency Competition for Foreigners across the Globe
- ✚ Certified as one of the best scorers of the year at Kombolcha Institute of Technology and rewarded fully funded scholarship by Ethiopian ministry of education study my BSC abroad.

✚ Won second prize of “Youth Welcome the FISU Games” Themed Short Video Competition of Chengdu International Sister Cities Higher Education Institution Alliance

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### **Language:**

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| ■ Amharic: Native             | ■ Chinese: Elementary Level |
| ■ English: Professional Level | ■ Arabic: Elementary Level  |
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### **Hobbies:**

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| ■ Hiking and Cycling       | ■ Volunteering       |
| ■ Skating and table tennis | ■ Traveling          |
| ■ Watching Movies          | ■ Learning New Skill |
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