

APEDO KOMI ETSE YVON

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[Email](#) ♦ [Linkedin](#) ♦ [Github](#) ♦ [Researchgate](#)

RESEARCH INTERESTS

Deep learning, Computer Vision, Image Classification, Semantic Segmentation, Anomaly detection

EDUCATION

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|---|----------------------------------|
| M.Sc. in Computer Science and Technology , Northwestern Polytechnical University (NWPU) | 2022 – 2025 |
| Courses: Data mining, Artificial neural Network, Human computer interaction, data visualization, pattern classification, Advanced Operating Systems | Xi'an, China 93.91/100 |
| Coursework towards M.S. in Artificial Intelligence , Nanjing University of Information Science & Technology | 2022 – 2023 |
| Courses: Computer Vision & Pattern Recognition, Deep Learning , Neural Network, Natural Language Processing, Optimization Theory etc. | Nanjing, China GPA: 4.17/5.00 |
| B.Eng. in Computer Science and Technology , Yunnan Technology & Business University (YTBU) | 2018 – 2022 |
| | Kunming, China GPA: 3.95/4.00 |

RESEARCH EXPERIENCE

Weakly supervised crack segmentation using adversarial learning and transformers (under review in Journal of Soft Computing)

- We use adversarial learning to simultaneously generate synthetic crack images and generate a segmentation map mitigating the need for a multi-step process, and noisy pseudo-labels.
- The proposed encoder-decoder model for the segmentation task includes a Transformer-based feature enhancement module to capture long-range dependencies and combine high- and low-level features. Experiments on 2 datasets.

Hierarchical Feature Aggregation and Feature Shrinkage Decoder for Road Crack Segmentation

- We present a shift semantic module to mine the contextual semantics of images, and a Feature Shrinkage Decoder to aggregate and refine adjacent feature maps for improved accuracy. Experiments on 3 datasets.

Domain adaptation for crack segmentation(under review in Journal of Multimedia Tools and Applications)

- Our framework performs domain adaptation at both the input and feature levels using the Style Transfer Module (STM), Amplitude Fusion (AFF), and the Feature Adaptation Module (FAM). Experiments on 5 datasets.

Systematic Literature Review on Forecasting and Prediction of Technical Debt Evolution

- We conducted a Systematic Literature Review encompassing 646 distinct papers published until 2023. Following a well-established methodology applied in software engineering, we identified and included 14 primary studies for analysis

LICENSES & CERTIFICATIONS

- **Machine learning specialization: Stanford University and DeepLearning.AI (Cert. [link](#)) - 2023**
Contents: supervised learning, unsupervised learning, recommender systems, and reinforcement learning
Taught by Andrew Ng on Coursera
- **Deep learning specialization: DeepLearning.AI (Cert. [link](#)) - 2023**
Contents: Convolutional Neural Networks, Recurrent Neural Networks, LSTMs, Transformers etc..
Taught by Andrew Ng on Coursera
- **Chinese Proficiency Test (HSK) – 2021**
Level 4: 271

CONFERENCES & SEMINARS

- **2024 SDG Global Summer School: Data Visualization** organized by Zhejiang University
- **2023 International Young Scholars Summer School** organized by University of Chinese Academy of Sciences (UCAS), Shenzhen Institute of Advanced Technology (SIAT) & Institute of Urban Environment (UIE)
- **Seminar on Advanced Skills of New Generation Information and Communication Technology** organized by Chongqing University of Posts and Telecommunications sponsored by the Chongqing Municipal Gov.
- **Seminar on Information Technology Application** organized by UNITAR & CIFAL Shanghai sponsored by the Minister of Commerce of the People’s Republic of China
- **Seminar on Regional Economic Planning and Development** organized by UNITAR & CIFAL Shanghai sponsored by the Minister of Commerce of the People’s Republic of China
- **SDG July Camp - Low-carbon buildings and cities** organized by Shanghai Jiaotong University
- **Belt & Road Cultural Heritage Global Alliance Summer Camp** by NPU Institute of Culture & Heritage
- **NPU Global Summer Open Courses Program**
- **Certificate of recognition: Bentham Outstanding reviewer**

SOFTWARE DEVELOPMENT PROJECTS

- **ALAN AI:** News web application utilizing the REACT (LIVE [link](#))
- **AMAZON CLONE:** Replica of the Amazon homepage, with login and secure checkout system. (LIVE [link](#))
- **HR-SSM:** A robust HR management web application built on the SSM framework (GitHub [link](#))
- **TOURISM BLOG:** Dynamic tourism blog using JSP (GitHub [link](#))
- **PROJECT PETER:** Android project with registration and picture publication capabilities. (Github [link](#) | [back-end](#))
- **Vehicles Sales - KOMI (iOS App):** iOS application for vehicle sales including user registration, vehicle publication, and booking functionalities (GitHub [link](#) | [back-end](#))

PROFESSIONAL EXPERIENCE

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|---|-----------------------|
| Researcher - Image Computation Lab NPU | Sep. 2022 – |
| <ul style="list-style-type: none">• Identifying problems in computing and developing theories and models to address them• Working with other scientists and engineers to solve complex computing problems• Designing and conducting experiments to test the operation of software systems, frequently using techniques from data science and machine learning• Analyzing the results of experiments, Designing and developing new technologies, finding new applications for current technologies, and looking for computing solutions | Xi'an - China |
| Senior Business Designer - Fairpointers Ltd. | Mar. 2017 – Oct. 2018 |
| <ul style="list-style-type: none">• Professional slide designer, slide service provider• Photoshop, PowerPoint, Inkscape | Accra, Ghana |
| Database Administration Intern - Social entrepreneurship International | Jan. 2017 – Feb. 2017 |
| <ul style="list-style-type: none">• Implementation and maintenance of a database management system• Implementation of a web based administration system using oracle APEX | Accra, Ghana |

PROFESSIONAL MEMBERSHIP

- **IndabaX Togo, Member:** Indaba's mission is to empower Africans to become active participants and owners of the technological advances in AI.
- **Black in AI, Member:** platform dedicated to sharing ideas, fostering collaborations, and discussing initiatives aimed at increasing the representation of Black individuals in the field of Artificial Intelligence

SKILLS

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|-------------------------|---|
| Technical Skills | PyTorch, Keras, Full stack web development, Android Development |
| Coding Skills | Python, Java, C#, JavaScript |
| Languages | English, French, Chinese, Ewe |
| Other Skills | Time management, Collaboration, Communication Skills, Problem Solving |

VOLUNTEERING

- **NPU Academic Volunteer :** 2022-2023
- **Outstanding volunteering in School history promotion:** 2023