

DANIEL DESTAW

Linkedin.com/in/daniel-destaw-a92700300 • +251988886692 • daniel.destaw@wegagenbanksc.com.et

SUMMARY

Aspiring computer vision researcher with knowledge in image processing, machine learning, and deep learning. Familiar with Python and frameworks like TensorFlow and PyTorch, with strong analytical and collaborative skills.

RESEARCH INTERESTS

- **3D Scene Reconstruction:** Exploring lattice-based cryptography and deep learning models to enhance 3D reconstruction accuracy using RGB-D imagery.
 - **Machine Learning and Computer Vision:** Application of algorithms for image classification, object detection, and human perception integration.
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RESEARCH SKILLS

- **Literature Review:** Ability to conduct thorough reviews of existing research in computer vision and related fields.
 - **Experimental Design:** Experience designing experiments to evaluate algorithms and models.
 - **Statistical Analysis:** Knowledge of statistical methods for analyzing experimental results.
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TECHNICAL SKILLS

- **Image Processing:** Filtering, segmentation, feature extraction.
- **Machine Learning:** Supervised and unsupervised algorithms.
- **Deep Learning:** CNNs for image classification and object detection.
- **Programming:** Python, C++, MATLAB.
- **Frameworks:** TensorFlow, PyTorch, OpenCV, scikit-learn.
- **Data Annotation:** Experience with image labeling tools.

SOFT SKILLS

- **Problem-Solving:** Strong analytical skills for troubleshooting and optimizing algorithms.
 - **Collaboration:** Ability to work effectively in interdisciplinary teams and communicate complex concepts clearly.
 - **Project Management:** Experience managing research projects from conception to completion.
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WORK EXPERIENCE

Wegagen International Bank | Software Engineer / Full Stack 03/2023 – Present

- Built web applications with HTML, CSS, JavaScript, React, and Node.js.
- Designed user-friendly interfaces and implemented RESTful APIs.
- Managed databases and participated in code reviews.

School of IT | Programming Language Instructor 01/2023 – Present

- Taught Python, Java, and C++ while developing engaging course materials and hands-on projects to enhance student learning.

Quantum Technology PLC | Full-Stack Engineer

08/2021 – 03/2023

- Developed web applications using Laravel and CodeIgniter, including a food delivery application and an airtime charging app, focusing on both front-end and back-end solutions to enhance functionality and user experience.

ICog Lab | Machine Learning Computer Vision Intern

02/2020 – 08/2021

- Collected and preprocessed datasets for computer vision tasks.
- Collaborated on developing machine learning algorithms with OpenCV, including image classification and object detection.

Qelemmeda | Software Development Engineer Intern

06/2017 – 09/2021

- Participated in the development of an 8th-grade system for testing and publishing final year results, as well as national exam results, contributing to improved educational assessments.

RESEARCH EXPERIENCE

Google Translate Gender Bias(English to Amharic)

- Conducted research on gender bias in Google Translate for Amharic, collecting a dataset of 8,000 examples. Found that phrases like "The doctor is good" were translated with a male bias, such as "ሐኪሙ ጥሩ ነው."

3D Scene Reconstruction Leveraging Human Perception (Present)

- Developing deep learning models using human perceptual cues to improve 3D scene reconstruction.
- Investigating the integration of semantic and geometric data for enhanced scene analysis.

PROJECTS

Amharic Handwriting Recognition

- Developed a machine learning model for recognizing handwritten Amharic text, enhancing accessibility for native speakers.

Face Mask Detection System (COVID-19 Response)

- Developed a face mask detection system using YOLOv5, achieving an accuracy of 93%. Collected and curated a custom dataset during the COVID-19 pandemic to train the model effectively.

Facial Recognition Exit and Entry Monitoring System

- Created a monitoring system integrating facial recognition with license plate recognition and QR code scanning for secure access, accommodating users with face coverings.

EDUCATION

Wollo University, Kombolcha Institute of Technology

B.S. in Software Engineering

CGPA: 3.01

August 2016 – May 2021

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Artificial Intelligence, Mobile App Development, User Experience/User Interfaces.