CHIDERA LAURA IDABOR (SHE/HER)

(814) 384 – 1950 • chideraidabor@yahoo.com
https://portfolio-x0cl.onrender.com/

AI graduate student at Kent State University with a background in software engineering and experience building real-world systems across industry and research settings. Currently a Generative AI Intern at Babcock & Wilcox, working on image classification, semantic search, and generative modeling tools to organize and visualize large collections of industrial data. Comfortable working end to end in Python and Flask, with experience applying machine learning techniques to practical engineering problems.

EDUCATION

Kent State University, Kent, OH *(08/2024 – 05/2026)*
Master of Science in Artificial Intelligence, **GPA:** 3.97
Gannon University, Erie, PA *(01/2018 – 05/2021)*
Bachelor of Science in Software Engineering (SE), **GPA:** 3.87

TECHNICAL FIELD EXPERIENCE

Generative Artificial Intelligence Intern, Babcock & Wilcox (***10/2024 - present)***

1. Designing and building a scalable image-classification and semantic-search prototype to organize extensive internal media library, which contains tens of thousands of unstructured industrial images.
2. Developing a flexible multi-label tagging framework using folder-based hierarchy, metadata generation, and tag normalization to support Product, Service, and Topic classifications defined by Marketing.
3. Implementing a CLIP-powered semantic search engine in Python and Flask that retrieves images based on natural-language queries (e.g., “radiant boiler construction”, “wet ESP installation”), returning ranked thumbnails and file paths.
4. Creating an automated Python pipelines to parse image directories, generate metadata (category, tags, display tags), and prepare training datasets for CNN-based image classification models.
5. Fine-tuned Stable Diffusion XL models with Textual Inversion and LoRA to turn CAD structures into photorealistic images of industrial plants, helping the team visualize how projects would look in real construction environments.
6. Wrote Python scripts that connected with Hugging Face, OpenAI’s gpt-image-1, Google Gemini, and AzureAI services to generate customized images for company use.
7. Collected prompt requests from internal clients and refined them through prompt engineering, testing different approaches until the model produced images that matched client needs and branding expectations.
8. Delivered images that were used in marketing materials and shared with clients as visual aids to support project proposals and discussions.
9. Used Azure Sprint Boards to organize and track experiments, manage tasks, and keep the team aligned.
10. Built PowerApps prototypes to make it easier for technical teams to share requirements and provide feedback during projects.

Software Engineer, TechnipFMC **(*08/2021 - 07/2024)***

1. Managed metering products for liquid and gas fuel measurement and control embedded software applications for fuel terminal automation, significantly enhancing operational efficiency.
2. Maintained and upgraded communication interfaces, including Modbus and MQTT, over ethernet and serial connections, ensuring robust and reliable data transfer.
3. Optimized simple relational databases for embedded applications using SQL, therefore reducing data retrieval times.
4. Developed and maintained software across Embedded Systems, Linux, and Windows OS using C++, SQL, JavaScript, and Python, leading to notable enhancements in product feature sets.
5. Created automated test suites using Python for integration tests, reducing testing time by 35% and improving overall software reliability.
6. Collaborated in full SDLC development of embedded software solutions, applying Agile practices to design, develop, test, and deploy features.

ACADEMIC PROJECTS

Commonly Ordered Items Recommendation System, Kent State University *(08/2025 – 12/2025)*
Developed a data-driven cross-selling recommendation engine that analyzes historical invoice data using item-based collaborative filtering and cosine similarity to generate real-time Top-N complementary product recommendations, incorporating business compatibility rules and a Flask-based API for seamless integration into an invoicing workflow.

CT StreamDB: Television Series Analytics and Discovery Platform, Kent State University *(08/2025 – 12/2025)*
Developed a Flask-based television series discovery and analytics platform using IMDb data, featuring genre filtering, autocomplete search, poster caching, and season-level rating visualizations backed by an optimized SQLite database.

Telebot 3 Human-Robot Interaction System, Kent State University *(08/2024 – 12/2024)*
Developed and managed an interactive robot with facial recognition, speech synthesis, and animated digital face to greet people by name and manage personalized dialogues.

Melanoma Image Segmentation, Kent State University *(01/2025 – 05/2024)*

Applied image processing (ABC + gray thresholding) and a U-Net deep learning pipeline to segment melanoma lesions, then benchmarked U-Net against YOLOv11-Seg on the ISIC 2017 dataset — achieving 93.09% sensitivity for U-Net versus 94.13% accuracy and 91.82% specificity for YOLOv11-Seg.

PROFESSIONAL CERTIFICATIONS

IBM Machine Learning with Python ***(09/2024)***
Certified SAFe 5 Scrum Master (SSM) ***(11/2022)***
IEEE Guest Speaker, Erie Sector Dinner, PA ***(12/2023)***

TECHNICAL SKILLS

AI & Machine Learning: Generative AI (Stable Diffusion XL, LoRA, Textual Inversion, Prompt Engineering, API Integration with OpenAI gpt-image-1, Hugging Face, Google Gemini, AzureAI), Computer Vision (OpenCV, U-Net, YOLOv11-Seg), Image Processing (Fourier Transform, Thresholding, Morphological Ops), Supervised & Unsupervised Learning, Deep Learning Pipelines, Dataset Augmentation.
Programming & Frameworks: Python (NumPy, Pandas, Scikit-learn, Matplotlib, PyTorch, TensorFlow), C++, Java, JavaScript, SQL, HTML/CSS.
Tools & Platforms: Git/GitHub, Docker, CI/CD, PyTest, Selenium, Jira, Azure Sprint Boards, PowerApps, Navisworks, GIMP scripting, Linux & Windows OS, Agile (Scrum).