

John William

📍 Cairo, Egypt 📩 johnlorance90@gmail.com ☎ 012 2002 90 31 💬 <https://www.linkedin.com/in/john-lorance/>
🌐 <https://github.com/Johnlorance>

Experience

NeuroTech, AI Instructor

- Delivered over **100+ hours** of lectures on AI, ML, and deep learning.
- Taught advanced topics including **CNNs, GANs, RAGs, LLMs**, and **AI Agents**, with hands-on projects that improved students' model accuracy by **20–30%**.

Dokki, Cairo
April 2025 – Present

Tech-Hub, Integration and Middleware Engineer

- Working at **Tech-Hub**, an **IBM Golden Partner**, where designing and implementing middleware solutions using **IBM App Connect** and **IBM MQ**.
- Developed message flows** and **SOAP services**
- Integrated **SQL Server** with enterprise applications using **ODBC**, enabling real-time data access and improved system connectivity.

Maadi, Cairo
September 2024 – Present

iSchool, Coding Instructor

- Lectured** students **aged 6-17**, starting from **basic programming** concepts up to **application development, game development**, and **data analysis** using Python.

Remote - Project-Based
February 2025 - April 2025

Intixel, Computer Vision Engineer Intern

- Developed** and **implemented** advanced **computer vision algorithms** for real-world healthcare imaging tasks, contributing to internal R&D projects.
- Optimized** pre-trained deep learning models, improving inference speed by **30%** and accuracy by around **12%** on selected tasks.
- Collaborated with a cross-functional team of AI researchers and software engineers to **integrate CV modules** into production pipelines.

Nasr City, Cairo – Internship
October 2024 – February 2025

Nile University, Junior Teacher Assistant

- Assisted TAs in teaching academic tasks.

El Sheikh Zayed City, Egypt
September 2022 - Feb 2023

Education

BCS

Nile University, Information Technology and Computer Science

Sept 2020 – May 2024

- Major:** Artificial Intelligence
- GPA: 3.4/4.0

Publications

Development of an AI-Based Website for Automated Pre-Operative Planning in Aortic Valve Replacement Using Deep Learning

Jan 2025

Paper Reference ↗

John Lorance William, Nadine Farid Elshafey, Nadine Walid Abdallah, Nouran Hady Shaaban, Sama Ahmed Okasha, Mustafa A. Elattar

Awards and Scholarships

Our graduation project was awarded 6th place, competing against 215 submissions from 11 countries.

May 2024

Certificate ↗

Dell Technologies' Envision the Future Competition 2024

Main Projects

AI-based Website for Automated Pre-Operative Planning in Aortic Valve Replacement using Deep Learning

- Led a team of **5 members** to develop an **AI-powered web system** for **optimizing valve sizing** in heart surgeries. Used **CTA imaging data** to construct **3D anatomical models**, perform **aortic valve segmentation**, and detect **anatomical landmarks** automatically.
- Achieved **90% accuracy**, outperforming manual expert estimations (**81%**).
- **Tools Used:** Python, Deep Learning, MongoDB, Model Deployment, Fine-Tuning.

github.com/repo ↗

Multi-Class Classification of Plant Diseases

- Built and compared two **CNN architectures** to classify images into **38 plant disease categories**. One model was designed from scratch, while the second used **Transfer Learning** via **VGG-16**.
- **Fine-tuning** improved accuracy by **15%** over baseline model performance.
- **Tools Used:** Python, TensorFlow, Keras, OpenCV, VGG-16, Image Classification, Data Augmentation, Jupyter Notebook.

github.com/repo ↗

Autonomous Cars on IDD using Detectron2

- Trained a real-time **Instance Segmentation** model on the **IDD dataset** using **Detectron2**, capable of detecting **vehicles, pedestrians, traffic signs, and road markings**.
- Achieved **high accuracy** in complex road environments, suitable for **autonomous driving** applications.
- **Tools Used:** Detectron2, Python, PyTorch, Deep Learning, IDD Dataset.

Certifications

Associate Data Scientist in Python

March 2025 - Present

DataCamp

Microsoft Machine Learning

June 2024 - December 2024

Digital Egypt Pioneers Initiative (DEPI)

Volunteering and Leadership

Ministry of Communications and Information Technology of Egypt

June 2024 - December 2024

One of the DEPI program team leaders

IEEE - Nile University

Oct 2020 - Oct 2023

Vice president of Public Relations Team

Skills

Programming Languages:

C++, C, Java, SQL, JavaScript
Artificial intelligence and Data science: Machine Learning, Deep Learning, computer vision, CNN, Natural Language Processing, Sentiment Analysis, Machine learning algorithms, OpenCV, PyTorch, TensorFlow, Model Evaluation, Supervised Learning, scikit-learn, RNN, LLMs, LSTMs, GANS, RAG, Image Processing, Data Science, Data Visualization, Data Analysis, Git

Integration and Middleware: IBM MQ, IBM App Connect, System Integration, REST API, API Development, SOAP, Middleware Solutions, LoopBack, ODBC.

Soft Skills: Communication Skills, Teamwork and Collaboration, Problem-Solving, Attention to Detail, Analytical Thinking and Planning, and Leadership.