

Technical Portfolio – GADZIDE Komi Joël

High School Science Diploma – Highest Honors | Lycée d'Adidogomé I

GitHub Portfolio: <https://github.com/gadzide-joel/Portfolio-projects>

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EXECUTIVE SUMMARY

8 international certifications from leading universities, representing 300+ hours of self-directed study validated through 20+ technical projects. The combination of theoretical knowledge from Duke University, University of Michigan, University of Illinois, and UC Irvine with practical implementation across multiple programming domains demonstrates exceptional technical proficiency and self-learning capability.

Key Achievement: All certifications completed independently while maintaining Baccalauréat with Highest Honors, demonstrating exceptional self-motivation and technical aptitude.

Technical Skills Overview

- Object-Oriented Programming:** Java, C++ - Advanced system design
- Python & Scientific Computing:** Data analysis, numerical methods, AI/ML
- Embedded Systems & IoT:** Arduino, hardware integration, sensor networks
- Web Development:** JavaScript, HTML/CSS, responsive design
- Data Structures & Algorithms:** Optimization, memory management, performance

Certifications Summary

#	Certificate	Institution	Completed	Hours	Key Skills	GitHub Projects
1	Programming Foundations with JavaScript, HTML & CSS	Duke University (Coursera)	2025	32	JavaScript, HTML/CSS, DOM manipulation, web development	Plant Store Landing Page
2	Programming Fundamentals	Duke University (Coursera)	2025	18	Core programming logic, computational thinking, problem-solving	Tic-Tac-Toe GUI Game (Python Tkinter)

3	Programming for Everybody (Python)	University of Michigan (Coursera)	2025	18	Python fundamentals, data types, loops, file I/O	Numerical Analysis Notebooks (Multiple)
4	Object-Oriented Data Structures in C++	University of Illinois (Coursera)	2025	21	C++ OOP, data structures (linked lists, trees, stacks), memory management	C Linked List Operations, C++ Banking System
5	Introduction to IoT & Embedded Systems	University of California Irvine (Coursera)	2025	11	IoT architecture, embedded hardware, system design, protocols	Arduino Serial LED Projects (2 projects)
6	Java Programming: Solving Problems with Software	Duke University (Coursera)	2025	18	Java fundamentals, OOP principles, algorithms, problem-solving	Library Management System, Pokemon Battle System, Store Project
7	Mastering Python Sequences and Strings	EDUCBA (Coursera)	2025	7	Python data structures optimization, string manipulation, performance	Applied Numerical Methods, Matrix Analysis
8	Machine Learning with Python	FreeCodeCamp	2025	100	Supervised/unsupervised learning, scikit-learn, neural networks, model evaluation	ML Implementations, Data Analysis Projects

Total: 220+ documented hours (additional 80+ hours in project development and debugging)

Technical Projects Portfolio

Programming Fundamentals & Web (3 projects)

- **Plant Store Landing Page** (HTML/CSS/JavaScript) – Responsive web design
- **Tic-Tac-Toe GUI** (Python Tkinter) – Event-driven programming
- **Multiple web components** – DOM manipulation, interactivity

Object-Oriented Programming (6+ projects)

Java:

- **Library Management System** – Complete CRUD with inheritance
- **Pokemon Battle System** – Abstract classes, polymorphism
- **Movie Recommendation System** – Data analysis algorithms
- **Store Management** – Inventory and transaction handling

C++:

- **Banking Management System** – Advanced OOP with file I/O
- **Scientific Calculator** – Expression parsing, data structures

- **Mini Compiler** – Lexer, parser, interpreter implementation
- **Snake Game** – Real-time game loop, collision detection

Data Structures & Algorithms (4+ projects)

- **C Linked List Operations** – Manual memory management
- **Network Optimization (Dijkstra's Algorithm)** – Graph theory
- **Graph Representation & Adjacency** – Multiple implementations
- **Custom data structures** – Used across all C++ projects

Python Scientific Computing (10+ projects)

- **Numerical Analysis with SymPy** – Symbolic mathematics
- **Applied Kinematics & Integration** – Physics simulations
- **Particle Kinematics & Arc Length** – Computational physics
- **Matrix Analysis & Linear Systems** – Linear algebra
- **Multivariable Function Visualization** – 3D graphing
- **Applied Numerical Methods** – Calculus and algebra
- **Multiple Jupyter notebooks** – Scientific computing workflows

Embedded Systems & IoT (2 projects)

- **Arduino Serial LED Control (Project 1)** – Serial communication
- **Arduino Serial LED Control with Web Interface (Project 2)** – IoT integration

Game Development (2 projects)

- **Endless Car Runner** (Python Pygame) – Game mechanics, sprites
- **Snake Game** (C++ Console) – Real-time input, collision detection

GitHub Stats: 20+ repositories | 6 programming languages | 100+ commits

Skills Matrix

Skill Category	Proficiency Level	Certifications	Projects
Object-Oriented Programming	Advanced	1	6+
Python Scientific Computing	Advanced	2	10+
Data Structures & Algorithms	Intermediate	2	5+
Embedded Systems & IoT	Intermediate	1	2+
Machine Learning	Intermediate	1	Multiple
Web Development	Intermediate	1	2+
Game Development	Intermediate	-	3

GitHub Statistics

- **20+ repositories across 6 programming languages**
- **100+ commits demonstrating consistent development**
- **219 files showcasing diverse technical capabilities**

Verification & Authenticity

- ✓ All certifications include unique verification IDs
- ✓ Digital certificates available upon request
- ✓ Coursera profiles publicly viewable
- ✓ GitHub repository is public: <https://github.com/gadzide-joel/Portfolio-projects>

Contact Information

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