Omar Chida

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EDUCATION

UNIVERSITY OF SHERBROOKE
M.Sc. in Artificial Intelligence & Data Science
September 2023 | Sherbrooke, Canada

TELECOM NANCY
M.Sc.Eng. in Computer Science & Engineering
December 2023 | Nancy, France

UNIVERSITY OF LORRAINE
B.Sc. in Computer Science
August 2020 | Nancy, France

LINKS

LinkedIn:// **omarito**
Github:// **Darhal**
Stackoverflow:// **Omarito**
Twitter:// **@Omarito_0**
YouTube:// **@omaritoo**

COURSEWORK

GRADUATE
Machine Learning & Data Science
Probability Theory
Mathematical Logic & Formal Proofs
Numerical Methods
Compilation Theory + Practicum
Parallel and Distributed Systems
Image Processing
Blockchain
Finance & Economics

UNDERGRADUATE
Algorithms & Data Structures
Discrete Mathematics
Automata Theory
Graph Theory
Operating Systems
Computer Architecture
Computer Graphics
Web Development
Mobile Development
Database Design and Programming
Unix Tools and Scripting
Cybersecurity
Computer Networks
Intro to Robotics
Data Analysis

TECHNICAL SKILLS

Programming Languages:
C/C++ • Java • Python • JavaScript • Lua • TypeScript • QML • PHP • SQL • Matlab • R • GLSL • Latex
Frameworks/Libraries :
Qt • React • Flask • NumPy • Matplotlib • Sklearn • TensorFlow • SDL2 • OpenCV • OpenMP • MPI • Vulkan • OpenGL
Tools/Other :
AWS Cloud • Linux • WSL2 • Git

EXPERIENCE

AMAZON | Software Engineer (Intern)
May 2022 - Aug 2022 | Luxembourg, Luxembourg
- Developed an MVP of a data monitoring tool of various delivery programs
- Researched and designed a 99% available data integration system in Python using AWS data engineering tools (Kinesis, Glue, RDS, DMS, Redshift)
- Conceived and developed a 99.90% available server-less backend using Java and AWS (Lambda, S3, DynamoDB, APIG)
- Implemented an interactive web dashboard (React JS, TypeScript)

SONDARIA | Software Engineer (Contract)
Apr 2021 – Present | Lille, France (Remote)
- Development of a cross-platform poll based social media mobile app
- Implemented a pixel perfect and interactive user interface (Qt 6.2, JS, QML)
- Developed a concurrent backend server (Qt 6.2, C++17, Websockets)
- Designed and developed an ORM system to ease SQLite database interactions
- Devised an automatic database caching and synchronization mechanism

UNIVERSITY OF LORRAINE | Tutor (Contract)
Mar 2021 – Jun 2021 | Nancy, France
- Wrote and organised lectures about the C language
- Displayed technical communication skills and abilities

BELUXURY | Software Developer (Contract)
Apr 2020 – Jul 2020 | Washington, USA (Remote)
- Created a cross-platform commercial car rental mobile app from scratch
- Designed and implemented the application user interface (Qt 5.15, QML, JS)
- Conceived and implemented a web service backend API (PHP, MySQL, Apache)
- Developed a control panel for app administration purposes (HTML, JS, PHP)

INRIA/LORIA RESEARCH LAB | Software Developer (Intern)
Apr 2020 – May 2020 | Nancy, France
- Worked with **Prof. Sylvain Contassot-Vivier** and **Dr. Dominique Martinez** to design a neural description language for an academic **brain simulator** software.
- Developed a C++ module that loads, parses and analyses neural configuration files stored on disk to generate C code.

NOTABLE PROJECTS

IMAGE RESTORATION FOR LOSSY NETWORKS | Jan 2022 - May 2022
Worked with **Prof. Moufida Maimour** and colleagues to conceive and implement a deep learning based pipeline for image restoration targeted for Low-Power and Lossy Networks.

CIRCLE - A CUSTOM C COMPILER | Sept 2021 - May 2022
Worked closely with a team of 4 on a custom C compiler written in Java using ANTL4 targeting ARM machines.

ANALYSIS OF SARS-COV-2 | Oct 2020 – Dec 2020
Displayed project management skills by organising and assigning backlog tasks to the remaining 3 team members. Spearheaded the implementation of bio-informatics algorithms such as Levenshtein distance and Needleman-Wunsch. Worked on automatic testing and data visualisation using BioPython and Matplotlib.

VELOXENGINE - 3D GAME ENGINE | Apr 2019 - Present
Development of a high performance game engine from scratch using Vulkan and C++20. Worked on Render Hardware Interface. Developed an ECS system providing an easily parallelizable framework. Wrote a linear algebra module that use SIMD instructions. Implemented, tested and benchmarked different data structures.

PUBLICATIONS

[1] M. Maimour, E. Rondeau, O. Chida, C. Zhang, and al. Deep learning-based image restoration for low-power and lossy networks. *IEEE*, 2022.