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EDUCATION

INNOPOLIS UNIVERSITY

SOFTWARE ENGINEERING BACHELOR

Aug 2018 - Aug 2022

SOFTWARE ENGINEERING MASTERS

Aug 2022 - March 2023

LINKS

Blog: thesharpowl.github.io

Github: [TheSharpOwl](https://github.com/TheSharpOwl)

LinkedIn: [mohamad-ziad-a-999771118](https://www.linkedin.com/in/mohamad-ziad-a-999771118)

YouTube: [TheSharpOwl](https://www.youtube.com/channel/UCSharpOwl)

COURSES

Computer Graphics

Concurrent Programming

Scrum and Agile

Compiler Construction

Operating Systems

Functional Programming

Distributed Systems

Requirements Engineering

Managing Software Development

SKILLS

PROGRAMMING

Proficient:

C++ • C# • C • Git

CMake • C++ Boost • Python

Linux • Docker • OpenGL

Familiar:

Qt • GoLang • Javascript • Java

SQL • Unreal Engine • Unity

React (ReactJS)

LANGUAGES

• Arabic: Native

• English: Fluent

• Russian: Intermediate

AWARDS

• Syrian Informatics Olympiad:

Bronze Medal: top 3/100 (2015)

• Damascus ACM programming contest:

Bronze Medal: top 3/50 (2017)

• Asia Pacific Informatics Olympiad:

Honorable Mention (2017)

EXPERIENCE

ROADAR | C++ DEVELOPER

April 2021 – Present | Remote

- **Embedded systems** and **Computer Vision** for detecting road accidents and ensuring safety on the road Using **C++**, **CMake**, **OpenCV** and **OpenVino**.
- Implemented detection when breaking the speed limit on the road, improved detection of speed decrease, added unit tests and fixed communication between **Python** system test script with **Kafka**
- Ported the project to **Windows** with **MSVC** compiler after being working only with **Debian**.

INNOPOLIS UNIVERSITY | TEACHER ASSISTANT

August 2022 – December 2022 |

- Taught 1st year bachelor students. Subjects include: **C**, **Java**, **Object Oriented Programming** and **UML** diagrams.
- **87% of students** found the course useful, **88.96%** found The course an overall success

NATIONAL CENTER FOR THE DISTINGUISHED | ALGORITHMS

COACH

Sep 2015 – April 2017 | Damascus, Syria

- Tutored students for National Syrian Olympiad in informatics using **C++**, **6/10** were able to secure their spots in the **top 10** across the country in 2016.
- Tutored 2 students who achieved **1st** and **3rd** ranks across the country in 2017 (one of them achieved a Bronze Medal in International Olympiad in Informatics).

PROJECTS

MIZU ENGINE | GITHUB | RESEARCH LINK

- **C++ Direct3D 12** game engine (graduation project)
- Implemented comparison between Mesh shaders and other types

WONDERLAND | GITHUB | DEMO LINK

- Survival 2D game made using **C++**, **irrKlang**, **SFML**, **nlohmann json**, **CMake**.
- Wrote Animation, collision detection, support levels configuration using JSON files

ROLL CHAT BOT | GITHUB | TELEGRAM

- Chatbot made with **Python** using **Microsoft's QnA framework**
- Deployed on **Heroku** and using **REST API** to communicate with the QnA service

TRACKZAM STUDENTS TRACKER | GITHUB

- Made with **C# .NET 5 (Client)** and **Python (Server)** for lecturer's purposes.
- Implemented the client's (Key-Mouse logger and User accounts mechanisms) in addition to Windows and Errors Managers calling C functions from C# using **dll files**

FOOBAR COMPILER | GITHUB

Imperative Language compiler in **C++17** that translates to **LLVM** machine code for Compiler Construction course.