Karim Jaouhar

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EDUCATION

YORK UNIVERSITY
Bsc in Computer Science
Aug 2023 | Toronto, ON Canada
Lassonde School of Engineering
GPA: 3.4 / 4.0

IROQUOIS RIDGE HIGHSCHOOL
Grad. May 2020 | Oakville, ON Canada

SKILLS

PROGRAMMING LANGUAGES
Java • Python • Javascript
C • Assembly • Prolog

WEB DEVELOPMENT
React js • Node js • Next js
HTML • CSS • Tailwind • UI/UX

SOFTWARE DEVELOPMENT
Object-Oriented • Agile (SCRUM)
MySQL • Git • TDD • Design Patterns
Software Architecture

EMBEDDED SYSTEMS
Node MCU • Beagle Bone AI • HCS12
Interrupts • SPI/SCI • PWM • IoT

TOOLS AND UTILITIES
git version control • Eclipse IDE
VS Code • JUnit Terminal • SpotBugs
Arduino IDE • CodeWarrior

COURSES

YORK UNIVERSITY
Data Structures
Algorithm Design & Analysis
Embedded Systems
(HCS12 & Beagle Bone AI)
Artificial Intelligence
(Heuristic Search & Prolog)
Software Design & Engineering
Data Analysis
Computer Professional Ethics
Computational Theory
UI/UX Design

INDEPENDENT STUDY
Cyber and Information Security Course
Next React Framework Course
React Boot Camp Course
Iot Programming (Node MCU) Course

TECHNICAL PROJECTS

SMART FRIDGE INVENTORY SOFTWARE | Github
Software Engineering
- The Smart Fridge Inventory System (SFIS) is an **Object-oriented Java software application** group project, with a client and QA team.
- The project was developed following the **Agile (SCRUM) in 3 Iterations.**
- utilized **TDD, Solid design principles, design patterns, Static Analysis (SPOTBUGS), and code refactoring** based on our QA team's reports.

HOME SECURITY SYSTEM | Github
IoT, Web Development & AI (LLM)
- **Home security system** based on Node MCU, controlled with natural language using **GTP-3/4**, Forntend **React** application, and Node js **Restful API**.
- Improved home security and automation, enabling **multilingual unstructured natural language prompting.**

LSTM BOXING CLASSIFIER | Github | Demo
Machine Learning, Data Collection & MCU
- **LSTM model** to classify different boxing punches using **accelerometer data** collected from an ESP32.
- currently researching its application in interactive games, Health and Fitness, and Rehabilitation.

2X2X2 RUBICK'S CUBE SOLVER | Github | Demo
Logic Programming & Algorithm Design
- A Prolog program (Logic Programming) using the **meet-in-the-middle algorithm**, to find all the **shortest number of moves** to solve a 2x2x2 Rubick's cube which **has 3,674,160 possible states within seconds.**

EXPERIENCE

SQUARE DEVELOPER HACKATHON 2023 | Team Leader
June 2023 | Online Hackathon

WEB DESIGN & DEVELOPMENT | Freelance
Dec 2021 - April 2023 | Oakville, ON
- Designed and Developed Websites for **8 Canadian businesses.**
- Profited a total **$10,250**
- I had a **diverse set of clients**, ranging from garage door companies to wedding and event organizers.

SKAZ GARAGE DOOR INC. | Web app developer
Dec 2021 - Jan 2022 | London, ON
- Designed and developed a web application for **SKAZ Garage Door Inc.** that enables garage door customization, resulting in **significant improvements to their customer experience** and **reducing** the number of **customer service calls by 15%.**