Charbel FAYAD

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EDUCATION

Lebanese American University (LAU): School of Arts and Sciences — Byblos, Blat
BS, Computer Science (Honors Program) — 09/2021 – 06/2024 (Expected)
CGPA: 3.98, MGPA: 4 (High Distinction),

National Orthodox High School — Akkar, Halba
GPA: 3.8 (20th Place in Lebanese Baccalaureate) — 07/2021

Languages: Arabic (Native), French (Full Professional Proficiency), English (Full Professional Proficiency)

EXPERIENCE

Machine Learning Research – Lebanese American University — 2023 – present
- Developed a genetic programming algorithm to be incorporated in federated learning techniques.
- Designed a new algorithm to exploit population structure in evolutionary algorithms.
- Collaborated with researchers on different machine learning projects.
- Technologies: TensorFlow, Keras, DEAP, networkx, numpy, pandas

Software Engineering Internship – NinjaCo — 2023 – 3 months
- Developed a full stack web-based portal for the company, including 3 user types.
- Designed a complex parser and an algorithm to use web-based visual programming on physical Arduino.
- Successfully managed cross-functional team projects, ensuring timely delivery, and achieving project goals.
- Implemented CI/CD pipeline reducing release cycle times by 30%
- Technologies: NextJs, NestJs, Docker, MongoDB, Mongo Express, Minio, Maildev, Tailwind CSS, React Query, Blockly

Full Stack Software Engineer Internship – Ajjerni.com — 2022 – 3 months
- Developed and maintained an e-commerce web application using Next.js, Strapi, and PostgreSQL.
- Collaborated with team members to troubleshoot and resolve technical issues.
- Participated in code reviews and provided feedback to improve code quality.
- Technologies: NextJs, Strapi, Docker, PostgreSQL, Minio, Maildev, Tailwind CSS

PROJECTS

NinjaCo — 03/2023
Created a Full Stack website, that enables kids to code Arduino and Html using visual programming in a fully customizable editor with a clean user interface. The platform uses a course-based enrollment system • Live Preview

Attractors Simulation — 05/2022
Developed a fully customizable physics-based simulation of a deterministic chaotic system using JavaScript canvas context 2d, HTML and CSS. Hosted on GitHub pages • Live Preview • Source Code

Tourify — 11/2022
Published a full stack mobile application that help tourist explore Lebanon. Frontend in Ionic Angular coupled with a PHP Backend with MySQL as Database. The application source code and preview are available • Source Code

Personal Website — 03/2022
Worked on my portfolio to display my projects and information about me in a creative manner. Used NextJs with Typescript and tailwind, hosted on Netlify. Live Preview • Source Code

TECHNICAL SKILLS

- **Programming Languages**: JavaScript – Python – Java – TypeScript – Csharp – Rust – C – Dart – PHP
- **Frameworks / Libraries**: React – NodeJS – Fast API – Flutter – React Native – Tailwind – NextJs – Flask – Strapi
- **Database**: MySQL – Firebase – PostgreSQL – SQLite – MongoDB

SOCIAL SERVICES

Software Engineering Club Founder – LAU – Founded SE club at LAU, hosted workshops, and technical seminars.

Lab Instructor – LAU – Operating System, assisted students in the course lab by explaining programming principles.