



BELAL NATAFGI

DEVOPS & BACKEND ENG.

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Education

American University of Beirut

09/18 | Beirut, Lebanon

Bachelor of Engineering in Computer & Communications with emphasis on computer Software

Major Average 85.77%

Cumulative Average 82.04%

Last-Two-Year Average 85.16%

Awards graduated with **Distinction** and placed on FEA's Dean's **Honor List** for terms: Fall 2017/2018, Spring 2017/2018

Final Year Project Smart Traffic Light System Using Machine Learning

IEEE Paper Publication 10.1109/IMCET.2018.8603041

Coursework Algorithms & Data Structures, Database Systems, Web Programming & Design, Operating Systems, Parallel Computer Programming, Programming Language Design & Implementation, Software Testing, Mobile Networks & Applications, Cryptography & Network Security, Information Security, Embedded Microprocessor Systems, Computer Architecture

Projects

- Cloud-based (Firebase) Chat & Gallery Application on iOS in Swift.
- 2D Game using Qt Creator in C++.
- Office Automation System using Tiva-C micro-controller in C.
- Competition Scoring Game Using PIC micro-controller in Assembly.

Technical Skills

Experienced In

Python	Bash
HTML/CSS	JavaScript
C#/C++	VBA
Django/DRF	.NET MVC
ReactJS	Wordpress
MongoDB	SQL
Git	TFS
Docker	Kubernetes

Languages

Arabic	Native
English	Fluent

Experience

Backend Team Lead | CloudGate Consulting DWC-LLC

05/19 – 07/20 | Beirut, Lebanon | Full-Time

Network Configuration Manager

- Adopted API-First approach that increased API maturity which reduced repetitive modifications and allowed rapid frontend integration through server-mocking tools.
- Embraced OpenAPI for documentation, server-code generation, and client-code generation which vastly boosted the initiation and modification of the micro-service-based APIs.
- Designed structural and naming patterns for OpenAPI documents which sidestepped the generator's compatibility issues and eased the process of using the generated SDKs.
- Designed the monolithic repository structure for the micro-services, along with Git's branching technique, in addition to merging and committing conventions which resulted in agile and consistent version control.
- Implemented Pythonic patterns, such as decorators, along with dozens of helper functions that largely impacted code's consistency, readability, and structure, and alleviated the team's development process in various challenging occasions.
- Developed a plethora of Bash scripts that automated the process of generating, running, building, and deploying the services along with initializing and seeding the database which enormously facilitated the development process for the backend team and the integration and testing process for the frontend team.
- Used Setuptools for packaging code that is shared not only by the micro-services, but also by the Bash scripts which enhanced and eased the process of managing and extending those scripts.
- Secured the source code using code obfuscation and bundling tools like PyInstaller.
- Adopted Kubernetes as an orchestration tool for the solution to achieve high scalability and availability, rolling updates, and service discovery.
- Designed and Implemented an Instance Manager as an interface with either Kubernetes cluster or Docker daemon such that it can be queried by internal services to discover and communicate with others and to spin up new ones for increased parallelism.
- Implemented RSA Signing and Public Key Storage for secure micro-service authentication and authorization on Dev, Docker, and Kubernetes deployments.

Backend Developer | Saugo 360

11/18 – 04/19 | Beirut, Lebanon | Full-Time

Fellow Tenant

- Designed DB schema and applied migrations.
- Developed and maintained backend APIs in self-taught Django Rest Framework.
- Documented APIs using OpenAPI specification for easy integration with the FE Team.
- Integrated authentication with third parties, such as Google, Facebook, and LinkedIn.
- Applied permissions and business logic workflow through RESTful APIs.
- Utilized OOP significantly which minimized codebase and maximized code reusability.
- Implemented a minimal Object Document Mapper for MongoDB models which resulted in clean, maintainable, and extensible code along with Django's Object Relational Mapper.
- Integrated the solution with the payment gateway - PayFort - for electronic commerce and added support for automated refunds.
- Handled the deployment in a scripted and containerized fashion using Bash, Docker, Supervisor, and Nginx which eased migration among Dev., Stage, and Prod. servers.

Software Engineering Intern | MICE team at Murex Systems S.A.L

06/18 – 08/18 | Beirut, Lebanon | Full-Time

- Did an intensive research on cloud services with emphasis on cloud computing.
- Introduced a wide variety of Amazon Web Services to the team.
- Deployed numerous prototypes on AWS as proofs of concepts that assisted the team in picking the proper services such as Kubernetes (EKS), Hadoop (EMR), Lambda, EC2, etc.
- Attended weekly algorithms sessions which boosted my algorithmic skills and critical thinking.

Specialized Student in Web Development | IT Solution Delivery at AUB

06/17 – 05/18 | Beirut, Lebanon | Part-Time

- Developed a web application that unified emails among AUB users by utilizing generic HTML templates and embedding a role-based policy for template management in .NET MVC.
- Rewrote AUB's Health and Education Resource Unit web application which modernized the graphical user interface and enhanced the user experience in .NET MVC.
- Customized and edited Wordpress websites.
- Met with clients and discussed requirements.
- Gave Wordpress & HTML tutorials to clients.

Work-Study-Program Associate | IT Help Desk at AUB

02/16 – 05/17 | Beirut, Lebanon | Part-Time

- Developed report-generating Excel macros that were used as a primary tool for ticket management by the Help Desk Manager in VBA.
- Developed automation scripts that invoked the Excel macros during the absence of the Help Desk Manager in AutoIT and Windows Task Scheduler.
- Assisted the front desk and line support team.