Mohammad Ballouz

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Education

• MEPI Student Leaders Program | **Georgetown University**   **Washington, D.C. - USA**
  - Leadership and Project Management Training   June 2024 - July 2024

• BS in Computer Science | **Lebanese American University**   **Beirut, Lebanon**
  - Awarded degree with Distinction   August 2021 - June 2024
  - Recipient of the full-merit USAID Higher Education Scholarship

• Lebanese Baccalaureate | **Shhim Public High School**   **Shhim, Lebanon**
  - General Sciences: 18.22/20   October 2018 - June 2021

Professional Experience

Technical Business Analyst - Maids.cc   **July 2024 - November 2024**

- Led chat and data analysis for developing a chatbot using Python for NLP sentiment and intent analysis and Tableau for data visualizations.
- Developed pseudocode focusing on improving conversational flow and intent recognition for a chatbot.
- Documented technical specifications and flowcharts to communicate requirements and project scope.
- Co-designed UI/UX for the mobile app update focusing on performance and user experience.
- Conducted functional, performance, black box testing, and bug detection on the mobile application.
- Leveraged Agile development using Jira to plan, track, and manage tasks and projects.

Full-Stack Developer - Integrated Digital Systems   **November 2023 - January 2024**

- Created a dynamic web application using HTML, CSS, JS, and PHP, following the MVC pattern.
- Crafted a MySQL database focusing on CRUD operations and data model optimization.
- Utilized PHP-OOP principles including inheritance, encapsulation, abstraction, and polymorphism.

Software Engineer - SAUGO 360   **May 2023 - August 2023**

- Developed a dynamic testing component to streamline and accelerate the microservices testing process.
- Implemented using Python Tornado including integration with Elasticsearch database, RabbitMQ, Docker containers, and RESTful APIs for system component optimization validated using Postman.
- Conducted unit, functional, integration, regression, and performance testing.
- Integrated the testing component with a controller to validate operations, including message handling, HTTP requests, and validation of the Elasticsearch database.
- Automated testing by designing YAML test case files and defining test steps using JSON objects.
- Produced detailed technical documentation and user guides for the component.

Skills and Technologies

• Java and OOP	• JavaScript	• Model Evaluation	• Postman	• Firebase
• C	• Python/Python Tornado	• Data structures and algorithms	• RESTful APIs	• SQL
• C#	• PHP	• Relational database design	• Flutter (Dart)	• Docker
• HTML/CSS	• React Native	• Jira	• Elasticsearch	• RabbitMQ

Projects

CSC599 Capstone Project: PHILANTHROPY MOBILE APPLICATION   **Spring 2024**
• Developed a philanthropy mobile application using Flutter, implemented using Dart
• Utilized Firebase Authentication, Firebase Storage, and Cloud Firestore for data management operations

CSC461 Introduction to Machine Learning: OBESITY RISK PREDICTION   **Fall 2023**
• Collected, randomized, cleaned, visualized, and split a dataset for obesity risk
• Trained the dataset using Random Forest, XGBOOST, KNN, and Multinomial Linear Regression models
• Evaluated the model and utilized it on unseen data for predictions

CSC447 Parallel Prog/Multic. & Cluster: FAST FOURIER TRANSFORM   **Spring 2023**
• Parallelized and studied an algorithm for the Fast Fourier Transform using OpenMP, MPI, and CUDA

CSC375 Database Management Systems: DATABASE FOR A RESTAURANT CHAIN   **Fall 2022**
• Designed ER Diagram, translated the schema to tables, and normalized the tables according to BCNF
• Implemented the database using SQL on the Oracle Server

Achievements and Extracurricular Activities

Mentor and Python Tutor – **USAID Higher Education Scholarship, LAU**   **November 2023 - May 2024**
Advanced research for social impact - **SDG Brain Lab, UNGC Lebanon**   **October 2023 - June 2024**