

Abdallah Aloush

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Education

Alexandria University, BS in Computer and Communications Engineering

2018 – 2023

- GPA: 3.2/4.0

Experience

Back End SWE Intern, TrianglZ LLC

Feb 2023 – Apr 2023

- Built multiple verification endpoints using Ruby on Rails, resulting in a more efficient verification process.
- Implemented authorization policies using Pundit, enforcing compliance with data access rules.
- Wrote and maintained API documentation using Swagger, resulting in fewer integration errors.

Projects

Relational Database Management System (Graduation Project)

Rust

- Designed an SQL parser and developed logical and physical query planning systems capable of handling multiple inner joins, sorting, filtering, and grouping operations.
- Architected a storage engine featuring optimized buffer utilization, incorporating Hash and B+ Tree indexes, and supporting variable-length relation attributes.
- Implemented support for dynamic schemas encompassing various data types and relational constraints.

Gym Management System

Java

- Implemented a user-friendly GUI using JavaFX for adding, modifying, and managing users' data.
- Adhered to Test-Driven Development (TDD) methodologies within our team to ensure the system's integrity and conduct ongoing regression testing while collectively implementing new features.
- Used several OOP design patterns, including Singleton and Factory patterns, resulting in a readable and extensible code base.

Multithreaded Server-Client

Python

- Designed a multithreaded HTTP server, maintaining a persistent connection for each client.
- Implemented a heuristic timeout algorithm, preventing the server from being overloaded.
- Designed and implemented a simple client, allowing more robust testing of the server.

Mathematical Expression Interpreter

C

- Built a stack-based infix-to-postfix converter, improving expression evaluation efficiency.
- Stored evaluated expressions in a BST, enabling faster variable lookup.

Datastructures and Algorithms Implementations

Implementations of several commonly used Algorithms and Datastructures using C

- Designed an in-memory dictionary utilizing BST, enabling quick spelling checks and corrections.
- Designed a sorting algorithms benchmark app, enabling clear comparison of algorithms efficiency.

Skills

Programming Languages: C | Rust | Python | SQL | Java | JavaScript

Web frameworks: Ruby on Rails

Tools: Git | OOP | Datastructures | Algorithms

Extracurricular Activities

Loyal Victorians

- Best media member of the science and engineering fair committee.
- Head of Media in the Graduation Ceremony Organizing Committee.

Certifications

Fundamentals of Back End Engineering by Hussein Nasser