

Abdullah Alkhamis

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EDUCATION

Bachelor of Science, Computer Science Aug 2019 – May 2024 | Tucson, Arizona
University of Arizona

PROFESSIONAL EXPERIENCE

Web Developer Aug 2022 – present | Tucson, Arizona
Facilities Management - University of Arizona

- Led development and optimization of web applications using **ASP.NET Core** backend and **MS Blazor** frontend, elevating user experience with the **Telerik UI** component library.
- Managed **SQL** databases via **Linq** queries and Entity Framework, ensuring data integrity and efficient querying.
- Implemented tailored authorization and authentication mechanisms, refining user accessibility and app security.
- Augmented **Blazor** functionalities with **JavaScript**, facilitating efficient file operations.
- Streamlined app performance, achieving a **20%** faster response time through periodic code refactoring and the adoption of PDF processing libraries.

Equipment Checkout System

- Streamlined equipment loaning with real-time tracking and issue documentation.
- Incorporated a secure system for employee loan records and equipment data.
- Implemented role-based access controls, authorizing users and tailoring displayed data to their specific assignments.

SKILLS

Languages

Bash, C, C#, Python, Java, JavaScript | Haskell, Racket

Tools/Frameworks

Git, Docker, Azure DevOps, JUnit, NUnit | Blazor, React

Cloud

AWS, MS Azure

Data Management

Oracle Database, MySQL, MS SQL Server

PROJECTS

Financial Insight Application

Personal Project - Ongoing

- Hosting on **AWS**, using **React** for UI design and combining **ASP.NET Core** with **ML.NET** for advanced predictive analytics.
- Utilizing **Docker** to ensure consistent app deployment, enhance portability, and facilitate scalable infrastructure management.
- Implementing financial tools for subscription tracking, budgeting, and spending, enriching with forecasting algorithms.
- Integrating a responsive, user-friendly dashboard to visualize real-time spending habits, earnings, and tax deductions.

Extendible Hashing Index

Database Design

- Developed an extendible hashing index in **Java** for efficient data access from a binary database.
- Crafted a user interface to input key suffixes, enhancing precise record querying and display.
- Boosted performance by selectively reading index buckets, minimizing memory overhead.
- Leveraged extendible hashing for improved data retrieval speeds and optimal bucket usage.

XTank ☑

Object-Oriented Programming & Design

- Simulated a 2D tank warfare environment with engaging animations and entity interactions in **Java**.
- Developed a server-client architecture to facilitate real-time multiplayer interactions, enhancing competitive gameplay dynamics.
- Incorporated **SWT** for seamless graphical rendering and animation effects.
- Prioritized an Object-Oriented design approach, reinforcing modular development and effective entity handling.

Map Color Assigner ☑

Artificial Intelligence

- Developed a solution leveraging search techniques to address the Four-Color Theorem for map coloring.
- Formulated a blind-search algorithm in **Python**, optimizing for the efficient color assignment to the USA map.
- Demonstrated results through both dictionary-based text outputs and graphical representations using **Matplotlib**.
- Tackled a real-world combinatorial optimization challenge, ensuring distinct state colors with minimal resources.