

Hamdan Alkhoori

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PORTFOLIO

Education

The Pennsylvania State University—University Park, PA

Anticipated graduation: Dec 2023

College of Engineering-B.S. in Computer Science

Cumulative GPA: 3.75/4.00

Eberly College of Science-B.S. in Mathematics, System Analysis

- Relevant Coursework: Data Structure & Algorithms, Computer Organization and Design, Systems Programming, AI, Computer Vision, Quantum Computation, Database Management Systems, Programming Languages Concepts, Operating Systems, Object Oriented Programming, Discrete Mathematics, Numerical Analysis, Linear Programs, Linear Algebra, Theory of Games, Real Analysis, Blockchain, Probability Theory

Projects

Blockchain Network Simulation

Penn State | Spring 2023

- Implemented a mock blockchain simulating with mining, randomized transactions, real-time transaction hashing
- Modified a blockchain implementation to include a modified Proof-of-Stake algorithm, where nodes generate trust by counting initiated transactions.

Personal Website and Terminal-Like Profile

Dec 2022 - Current

- Created an about me website from scratch using HTML, CSS, and JavaScript
- Provided an interactive terminal-like portal which outputs information about myself based on the user's command line input

Tadbeer Agency- A Private Recruitment Agency Licenses for Domestic Workers

Alain | May 2022 - Current

- Worked directly with vendors to cut infrastructure costs by 40% while keeping specifications high
- Installed desktop computers, server, networks, safety systems and Q-Matic system
- Implemented a channel for service provision such as a website, call center and a recruitment platform

Real Estate Database Application

Penn State | Fall 2022

- Designed and developed an application to post a list of houses online
- Implemented a http interface to the database using php

Chat Application

Penn State | Summer 2022

- Implemented a chat application with client and server components and an interactive GUI

Field-Programming Gate Array (FPGA) MIPS Five Stage Pipelined CPU

Penn State | Fall 2021

- Utilized Xilinx Vivado software to implement a mini-CPU written in Verilog on a xc7z010clg400-1 device
- Mitigated data hazards and increased performance by implementing instruction forwarding

Room Scheduler

Penn State | Summer 2021

- Wrote a java application to facilitate room reservations
- Features: adding a new room, cancelling a reservation, adding a new date, checking status, dropping a room, interactive GUI

Experience

Customer Service Executive-Alain Municipality

June 2017 – July 2017

- Completed 6,000 transactions covering permits, leases, licenses, projects, plots, contracts, certifications
- Contributed to increasing customer satisfaction at 93%
- Assisting customers with filling out forms and completing paperwork

Presentations

Wildlife Conservation Using Drones to Track Wildlife Incidents

Penn State | Fall 2022

Skills

- Java, Python, C#, C, HTML, CSS, JavaScript, TypeScript, Verilog, KQL, SQL
- React, OpenCV, Kali Linux, Honeycomb, OpenTelemetry, SQLMap, Hashcat
- Docker, VirtualBox, Android Studio, Firebase Realtime Database, Parse Server, GitHub, Burp, Vivado, Power BI
- Fluent in Arabic, English