

ALBASHIR ALI

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Education

University of Colorado Boulder - B.S Computer Science

May 2025

Business Minor - Engineering Leadership Certificate(2024)

Boulder, Colorado

Technical Skills & Clearances

Clearance:Top Secret level security clearance

Operating Systems: Mac OS, Windows, Arduino, Raspberry Pi, Red Hat Enterprise Linux, Unix

Programming Languages: C, C++, Latex, Python, Assembly, Java, JavaScript, HTML, CSS, SQL, Scala

Developer Tools: GitHub, VS Code, Jupyterlab, Bootstrap, Docker, Postman, Qt Creator

System Engineering Tools : Cameo Systems Modeler, Doors, Microsoft Office

Relevant Coursework

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|------------------------|-----------------------|------------------------|---------------------------|
| • Data Structures | • Product Development | • Accounting & Finance | • Artificial Intelligence |
| • Software Development | • Data Science | • Operating Systems | • Network Systems |

Work Experience

Northrop Grumman

May 2023 - August 2024

Software Engineer Intern

Redondo Beach, CA

- Conducted multidisciplinary research and collaborated with system engineers in the design and development of electronic data processing systems by updating TRD requirements and refining sequence, class, and UML package diagrams.
- Utilized SQL, Java, and bash scripting to design and implement efficient algorithms, enhancing program functionality, performance, and access for cross-functional teams.
- Implemented J Unit and SonarQube to ensure code reliability,performance, and continuous code quality inspection.
- Conducted code reviews and improved user interface descriptions.

Projects

College MindSpace | *Founder*

December 2023 - Present

- Led a cross-functional team in the development of a diverse content library, including instructional videos, interactive coding projects, and educational resources in partnership with renowned educational platforms.
- Developed and implemented a comprehensive analytics framework to measure user engagement, learning outcomes, and overall project impact, driving continuous improvement and refinement of platform features.
- Spearheaded the integration of AI-driven essay editing tools and personalized learning algorithms, significantly enhancing the platform's capability to offer customized educational support.

Reliable UDP File Transfer System (RuFTP) | *Personal Project*

February 2024

- Implemented the Go-Back-N ARQ protocol, enhancing throughput by allowing multiple packets in flight, thus optimizing the use of network bandwidth.
- Ensured the application's compatibility across different platforms by adhering to POSIX standards, making it runnable on standard Ubuntu VMs without modifications.
- Implemented core FTP operations such as file upload, download, delete, and directory listing using UDP sockets, ensuring functionality similar to traditional FTP services.

Mock Cryptocurrency | *Personal Project*

April 2022

- Implemented a rudimentary version of the block chain that mines a replica cryptocurrency.
- Created functions that add transactions to a defined user after checking pending transactions validity using times stamps, the number of 0's in a hash value, and the previous hash.

Leadership

National Society of Black Engineers (NSBE)

April 2022 { Present

Rocky Mountain Zone chair (Regional Board)

205 Dangerfield Road, Alexandria, Virginia

- Oversee 14 NSBE chapters within zone 6, providing guidance on securing funding and best leadership practice.
- Coordinated large scale events, including FRC with 3000 attendees and National annual convention with over 20000 attendees.

Senator

University of Colorado Boulder

- Engaged in the legislative process, voting on critical issues including budget allocations, organizational policies, and strategic initiatives to drive NSBE's mission forward.
- Allocated a forty thousand budget for University of Colorado Boulder chapter, ensuring funds were distributed effectively to support the organization's goals and initiatives.