

Ali Haroon

ali.haroon@colorado.edu | github.com/Ali-Haroon3 | www.ali-haroon.com |

EDUCATION

University of Colorado Boulder

Bachelor of Science in Computer Science

Expected May 2026

GPA: 3.7

EXPERIENCE

Maxar Technologies

Software Development Intern

June 2025 - August 2025

Westminster, CO

- Engineered distributed AI architecture for 6 satellite ground station monitoring environments using Java and Kubernetes, processing 1TB+ daily telemetry data with sub-second latency and reducing critical incident response time by 30%
- Designed end-to-end QA framework with automated unit testing and ML-based test case generation for 15+ Linux microservices, implementing model serving infrastructure for real-time prediction pipelines in Jenkins CI/CD
- Built real-time observability dashboards using Grafana, Prometheus, and custom Java collectors to monitor 35 production services, enabling software testers to identify performance bottlenecks while preventing 2 outages through AI-driven alerting
- Implemented secure RESTful APIs with Spring Boot handling 1K+ requests/minute for satellite data access and ML inference endpoints, achieving p99 latency under 300ms for both data retrieval and model predictions

ReportsNow

Software Engineering Intern

May 2024 – July 2024

Greenwood Village, CO

- Designed and implemented RESTful APIs with Entity Framework and SQL Server to handle 500+ daily analytics queries, achieving 150ms average response time while maintaining 99.5% uptime during internship period
- Engineered full-stack business intelligence dashboard using C#, ASP.NET Core, and React that consolidated data from 125+ client systems, reducing report generation time by 40% (from 5 minutes to 3 minutes per report)
- Implemented CI/CD pipeline using Azure DevOps and Docker, reducing deployment time from 2 hours to 30 minutes while collaborating in Agile/SCRUM teams to deliver testable and maintainable software

CUChange

Data Management Research Assistant

July 2025 - Present

Boulder, CO

- Developed and maintained full-stack Django web applications with PostgreSQL and MongoDB backends on Google Cloud Platform (GCP), implementing RESTful APIs and ML-powered data analysis algorithms processing 50K+ research records
- Collaborated with cross-disciplinary research teams to design and manage multi-framework data pipelines, performing data cleaning and quality control using Python, pandas, and REDCap API
- Built automated workflows to migrate and transform REDCap datasets into R-based analytical reports, improving report generation speed by 300%

Kappa Theta Pi Professional Technology Fraternity

President (May 2024 - December 2024), Co-Founder

April 2023 – Present

Boulder, CO

- Founded non-profit technical fraternity chapter and expanded membership by 220% while securing industry partnerships
- Led development of cross-platform member administration system using HTML, JavaScript, and CSS serving 45+ members with identity and access management while following SDLC

PROJECTS

Lung Cancer Detection | *Python, TensorFlow, Streamlit, PostgreSQL*

github.com/Ali-Haroon3/Lung-Cancer-Detection | lung-cancer-detection-3bgh.onrender.com

June 2025 – Present

- Developed comprehensive medical imaging web application using CNN architectures (ResNet50, DenseNet121, EfficientNetB0) for lung cancer detection from CT scans and chest X-rays, with planned radiology report LLM integration
- Implemented transfer learning with medical-specific fine-tuning, achieving medical-grade performance metrics including sensitivity, specificity, and AUC-ROC analysis
- Built full-stack Streamlit application with PostgreSQL backend featuring DICOM support, batch processing, and comprehensive audit logging for medical workflows

BlackjackTrainer | *Python, Flask, JavaScript, HTML/CSS, AWS*

github.com/Ali-Haroon3/AIblackJackTrainer | blackjacktrainings.com

May 2025 – Present

- Built full-stack Flask web application with AI coaching system leveraging reinforcement learning and Monte Carlo tree search for optimal blackjack strategy in real-time gameplay
- Implemented card counting practice modules with Hi-Lo and Hi-Opt systems and comprehensive performance analytics
- Deployed on AWS App Runner with automated CI/CD pipeline and production WSGI server configuration

MedPrep | *React, Vue, TypeScript, HTML, CSS*

Built full-stack medical study application with interactive 3D anatomy models using React, Three.js, and TypeScript, featuring real-time visualization and cross-sectional views of human body systems

June 2024 – Present

- Developed comprehensive learning platform with Gen AI-powered spaced repetition flashcards, adaptive quizzing, and progress analytics, utilizing Zustand for state management and PostgreSQL for data persistence

SKILLS

Languages: Python, Java, C, C#, C++, TypeScript, JavaScript, SQL, Go

Frameworks: React, Node.js, Spring Boot, .NET, PyTorch, Flask, TensorFlow, Gherkin

Tools: Git/GitLab, Docker, Kubernetes, AWS (S3), Azure DevOps, Jira, Grafana, Heroku

Libraries: pandas, NumPy, SciPy, Matplotlib, bcrypt