Zain Baig

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EDUCATION & CERTIFICATIONS

University of Houston

Houston, TX

Bachelor of Science in Computer Science

May 2024

AWS Certified Cloud Practitioner

May 2025

EXPERIENCE

Freelance Software Developer

Apr 2023 – Present

Remote

- Delivered production-ready tools, including an NLP FAQ chatbot and SearchEngineX, supporting over 10,000+ documents with 95% retrieval accuracy.
- Built and deployed full-stack applications using Flask, React, and SQLite; implemented CI/CD pipelines with GitHub Actions, reducing deployment time by 30%.
- Led version control and code reviews across 50+ pull requests, ensuring code stability and feature completeness.

New Business Processor

Jun 2021 – Dec 2023

ManhattanLife, Houston, TX

- Automated premium verification and data entry workflows, reducing manual errors by 35% and processing time by 50%.
- Resolved 100+ data issues in collaboration with compliance and IT departments.

PROJECTS & TECHNICAL EXPERIENCE

SearchEngineX May 2025

- Designed a modular search engine with an inverted index and BM25 algorithm, achieving 95% retrieval accuracy across 10,000+ documents.
- Parallelized web crawling and NLP-based parsing with spaCy to enhance throughput and reduce latency.
- Deployed React-Flask-Docker stack to AWS with CI/CD via GitHub Actions, halving deployment time.

FAQ Chatbot Oct 2024

- Cut manual support requests by 60% with an NLP chatbot trained on company FAQs using Scikit-learn and SQLite.
- Streamlined retraining with automated scheduling and modular pipelines, boosting answer accuracy by 35%.

Cougarville Gas Apr 2024

- Built a logistics dashboard and delivery tracking system to manage 50+ weekly fuel orders, reducing manual reporting time by 70%.
- Improved backend responsiveness by **20%** using query optimization and modular architecture (Node.js, PostgreSQL, Kubernetes).

Coog R Mart Nov 2023

- Reduced stockouts by 25% via real-time inventory tracking and restock analytics powered by C++ microservices.
- Automated infrastructure alerts with PowerShell and streamlined deployment through Azure CI/CD.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, SQL, PowerShell, HTML, Bash

Web/Cloud: React.js, Node.js, Flask, Docker, Kubernetes, AWS, Azure, Google Cloud, Heroku

Databases: MySQL, PostgreSQL, SQLite, Meilisearch

Tools/Frameworks: Git, Jenkins, Pandas, NumPy, Scikit-learn, spaCy, pdfplumber