

Asra Naseem

LinkedIn: MyLinkedInProfile

Github: MyGithub

Email: anaseem2@gmu.edu

Mobile: +1(737)-899-5132

EDUCATION

- **George Mason University** Virginia, USA
Masters in Computer Science; GPA: 3.33 *Jan 2022 - Dec 2023*
Courses: Database Management (CS 550), Theory of Data Mining(CS 584), Analysis Of Algorithms(CS 583), Artificial Intelligence(CS 580), Advanced NLP (CS 768), Component Based Software development (SWE 645).

SKILLS SUMMARY

- **Languages:** Python, C, C++, JavaScript, SQL, HTML, CSS, JAVA
- **Frameworks:** jQuery, Django, Spring, NodeJS, ExpressJS
- **Databases:** MySQL, SQLite, MongoDB
- **Containerization and Deployment:** Docker, Kubernetes
- **Libraries:** Scikit, NLTK
- **version control:** Git, Github
- **CI/CD:** Github Actions
- **Cloud Computing Skills:** Amazon S3, Amazon EC2, Amazon RDS
- **Test Automation:** Selenium
- **Operating systems:** Linux, Windows

EXPERIENCE

- **Idaho National Laboratory** Remote
Software Developer (Internship) *April 2023 - Present*
 - **CI/CD Pipeline with GitHub Actions:** Established a CI/CD pipeline for Caldera Grid, Caldera CDM, emphasizing Ubuntu integration and leveraging Docker, leading to a 40% reduction in deployment time. updates in sync with source code modifications.
 - **Documentation with ReadtheDocs:** Authored and integrated dynamic documentation for Caldera Grid with ReadtheDocs, which has been referenced by over 5,000 users, enabling automatic
 - **Advanced GitHub Actions with Matrix:** Enhanced Caldera Grid, Caldera CDM CI/CD by incorporating a Matrix within GitHub Actions, ensuring robust testing across three platforms — Windows, Ubuntu, and macOS — and increasing code reliability by 25%.
- **Samsung Research and Development** Bangalore, India
Senior Software Developer (Full time) *July 2019 - Dec 2022*
 - **Auto Code Merger for Samsung Health Application:** Developed and implemented an Auto Code Merger for the Samsung Health Application, reducing build failures and manual effort associated with maintaining Espresso scripts. Analyzed changes in GIT CL to merge directly into Espresso script, ensuring seamless integration and enhancing efficiency by 98 percent.
 - **Dashboard for Samsung Internet:** Designed and implemented a comprehensive dashboard with full-stack capabilities, serving over 10,000 users, that includes user authentication using Django and PostgreSQL. Integrated with an advanced anti-tracking tool, this dashboard has successfully processed and visually presented data from over 500,000 browser histories, generating detailed charts and tables for easy analysis.
 - **Code Optimization and Memory Optimization of different Applications:** Successfully optimized three key applications—Samsung Health, Bixby Search, and SmartThings—by conducting in-depth code analysis on over 1.5 million lines of code, identifying and rectifying 120+ performance bottlenecks, 50+ memory leaks, and 30 design pattern discrepancies using the MAT tool in Eclipse.
 - **Scripts for Language Automation Tool used in Samsung Health Application:** Developed Python scripts for Samsung Health to audit 10,000+ English strings against 20+ languages, enhancing localization and ensuring translation accuracy. This tool identified discrepancies, ensured consistent user experience across regions, and generated concise linguistic reports for stakeholders.
 - **Key Achievement:** Developed the 'Auto Code Merger Tool' now actively utilized at HQ, which was chosen for presentation at the International Conference on Software and System Processes 2022.
- **Samsung Research and Development** Bangalore, India
Software Developer (Internship) *Jan 2019 - Jul 2019*
 - **Data Set Augmentation using GANS:** Led a deep learning project using Generative Adversarial Networks (GANs) to augment image datasets, resulting in a 150% increase in data input volume and enhancing the efficiency of subsequent ML initiatives by 30.
 - **Code Optimization for My Galaxy application:** Optimized the 'MyGalaxy' application, resulting in a 25% performance boost. Conducted over 50 comprehensive code reviews, rectified 10+ design pattern discrepancies, and resolved 15 critical memory leak issues.

PROJECTS

- **NutriAPI: A RESTful Engine for Beverage Recipes and Nutritional Data:**

Technologies Used: Python, Django, Django-rest frame, Sqlite, Postman for API testing, JSON

GITHUB repo

- Designed and implemented the database schema for storing smoothie recipes and nutritional information.
- Developed API endpoints to perform CRUD (Create, Read, Update, Delete) operations for smoothie recipes and their ingredients.
- Implemented advanced features like filtering smoothies by ingredient and providing nutritional summaries.
- Ensured data integrity and validation by serializing complex data types using Django serializers.
- Conducted comprehensive API testing using Postman to verify functionality and improve robustness.

- **Reproducibility Study and Enhancement of Token-aware Contrastive Learning (TACL) BERT Model:**

GITHUB repo

- Conducted a reproducibility study on TACL BERT, enhancing its pre-training using Token-aware Contrastive Learning.
- Achieved an F1 score of 89.1501 and Exact Match of 81.8448 with our TACL BERT model, outperforming the baseline BERT model.
- Explored TACL BERT's robustness and multilingual performance using the CheckList methodology, offering comprehensive behavioral evaluations.
- Identified areas of improvement in context understanding, disambiguation, and specificity through detailed error analysis.

- **NewsNest: Real-Time News Aggregator and Personalized Newsletter Subscription Platform:**

Technologies Used: Node.js, Express, Mailchimp API, News API, Bootstrap, HTML, CSS, JavaScript.

GITHUB repo

- Developed a robust web application that aggregates real-time news from various sources via the News API, offering users a centralized platform for up-to-date information.
- Implemented dynamic search functionality, allowing users to filter news by different categories such as Sports and Entertainment, enhancing user engagement.
- Integrated Mailchimp API to provide an automated newsletter subscription service, streamlining user onboarding and content distribution.
- Utilized Bootstrap for responsive front-end design, ensuring a consistent and visually appealing user interface across multiple devices.

AWARDS AND PUBLICATIONS

- **Publication and Presentations :**

-Presented the paper "Auto Code Merger Framework" at the ICSSP (International Conference on Software and Systems Process) Conference 2022, emphasizing an innovative framework to automate test automation code synchronization with developers' source code updates. This approach aims to bolster Continuous Integration (CI) efficiency and reduce test code failures.

Link: ICSSP 2022

-Published a technical article in the Samsung magazine, SE Beats, 2020 Edition 1.

- **Samsung Excellence Award Star Performer:** Recipient of the Samsung Excellence Award for being a Star Performer, recognized for significant contributions to the development of the Auto Code Merger Tool. The tool has led to improved 90 % efficiency and reduced build failures in the Continuous Integration process.