

Safina Chaudhry

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EDUCATION

University of Washington, Bothell M.Sc. in Computer Science and Software Engineering **Aug 2016 - Mar 2020**

IIUI , Islamabad BS in Software Engineering Software Engineering **Aug 2006 - May 2010**

Relevant Coursework: Data Structures, Advanced Algorithm Design and Analysis, Parallel Programming, Machine Learning, Multimedia Database Systems, Software Management, Database Management, Software Engineering.

PROFESSIONAL EXPERIENCE

Software Development Engineer Returnee, Amazon **July 2021 – Oct 2021**

- Created a design document for showcasing the benefits of onboarding to Camel Shadow Testing Framework.
- Developed an application for shadow testing using internal shadow testing framework and visualization tool, that eliminated the manual effort of parsing through the logs for finding differences.
- Setup an ECS service from ground up for hosting the shadow testing framework.

Teaching Assistant, University of Washington **Mar 2018 - Sep 2019**

- Reviewed data structures to evaluate and grade 5 course's examinations, assignments, and record grades.

Stay at Home Parent **Feb 2012 - Feb 2016, Nov 2021–June 2023**

Software Engineer, Your Engineering Solutions **Sep 2010 - Jan 2012**

- Designed and implemented user-friendly User Interface (UI) of M2 motorway, that improved user experience rating by **75%**.
- Developed a gas station management application using C#.Net, that boosted revenue generation by **40%**.
- Build database Objects like SQL queries and Stored Procedures in SQL Server.
- Created and generated business intelligence reports (financial and statistical) using Crystal report to support owners to make optimized decisions.
- Worked on technical project documentation for M2M and Gas station management project.

Software Engineering Intern, Your Engineering Solutions **Feb 2010 - Aug 2010**

- Designed and developed an **RFID** Attendance system and Homework management system for academic institutions using C#.Net.
- Provided messaging service to send parents messages on each entry/exit of the student.
- Created database design and implemented SQL queries and stored procedures that boosted system performance by **50%**.

PUBLICATION

Thomas, Jason A. & Burkhardt, Hannah A. et al. 'Assessing the Utility of Language and Voice Biomarkers to Predict Cognitive Impairment in the Framingham Heart Study Cognitive Aging Cohort Data'. 1 Jan. 2020: 905 – 922

PROJECTS AND RESEARCH

Automated Cognitive Decline Analysis Using Voice Features (Capstone)

- Developed a cognitive decline detection system using python, that evaluates speech audio recordings of neuropsychological examinations and other clinical test results of participants.
- Feature correlation and feature normalization techniques (Z-score normalization) were applied to make data suitable for processing.
- Processed Audio files to extract participant-only audio samples using python.
- Trained Long Short-term Memory (LSTM) model with **83%** and Convolutional Neural Network (CNN) model with **86%** accuracy. An API was implemented using the CNN model.

Video Shot Boundary Detection System

- Developed a Video Shot Boundary Detection System that allows the user to browse for a desired shot to play.
- Extracted 5000 video frames using ffmpeg and identified 31 keyframes using Twin-Comparison algorithm.

Difference Mapping Tool

- Functionalized Difference Mapping Tool in java, that identifies differences between two different versions of the same project and displays them.

Certificates

Meta Front-End Developer Professional Certificate **Jan 2023 - Present**

TECHNICAL SKILLS

Programming Languages: C#, Python, Java

Databases: SQL Server 2008, Oracle 11g with PL-SQL Developer.