S M Farhanur Rahman

469.438.3374 | farhanr8@utexas.edu

Dallas, Texas | https://farhanr8.github.io

Summary Statement

I am currently working as an associate Software Engineer developing and testing applications for my company. My education has given me an understanding of both high level and low level software. I am motivated and eager to learn to overcome my shortcomings. I am passionate about helping others and intend to write software for the benefit of society.

Education

University of Texas at Dallas
August 2019 - May 2021, Richardson-TX

Master of Science in Computer Science
Overall GPA: 3.92/4.00 (Magna Cum Laude)
Track: Systems

University of Texas at Austin
July 2015 - May 2019, Austin-TX

Bachelor of Science in Electrical Engineering
Overall GPA: 3.40/4.00
Primary Track: Software Engineering
Secondary Track: Computer Architecture & Embedded Systems

Jack E. Singley Academy
August 2011 - June 2015, Irving-TX

High School Diploma
Overall GPA: 3.98/4.00
Focus: Engineering

Work Experience

JPMorgan Chase / Software Engineer I-II

Apr 2022-Present, Dallas-TX

Developed and maintained RESTful backend microservices using Java Spring for customer identity authentication via third-party vendors. Designed APIs with best practices for request validation, business logic, and external system interactions. Conducted comprehensive testing, including unit, integration, and performance testing. Built CI/CD pipelines for deployment on Chase's internal cloud and also modernized legacy applications by migrating them to AWS.

Tata Consulting Services / Software Engineer

July 2021 - Apr 2022, Remote

I completed and earned the MEAN Stack certification through Simplilearn as part of TCS Initial Learning Program. Following that I completed training and certification for AWS-SAA and AWS-MLS. Lastly, I worked on a project to learn about Java Springboot and microservices.

Indo-Pak World Market / IT Support

Aug 2020 - July 2021, Arlington-TX

I assisted in creating an inventory of all store products to integrate with a new Point Of Sale system. I also worked with an ecommerce software solution to launch a store website/mobile app for online ordering.

Applied Research Labs / Student Technician

May 2018 - July 2019, Austin-TX

I assisted Naval Research using Python and Matlab on a Linux-based system. Specifically, with python I completed a demo for data transmission using Confluent Kafka and also used postgreSQL to store the data. With Matlab, I did several projects that included data labeling and Kernel Density Estimation.

Ruffalo Noel Levitz / Student Caller

Aug 2015 - May 2016, Austin-TX

Learned how to build rapport and communicate with parents and alumni of UT Austin. The communication was through phone calls and I successfully raised over $10,000 for the university in the time I worked there.

Research Experience

Undergraduate Research Assistant

Sept 2017 - May 2018, Austin-TX

Used C++ and python to assist a Simultaneous Localization and Mapping (SLAM) program written by a UT professor on a Linux system. It gave me experience with the linux terminal and the process of downloading linux packages. My role in the programming portion mainly involved debugging and organizing the written code.

Teaching Experience

CS Outreach Instructor

Jan 2020 - Mar 2020, Richardson-TX

Through the UTD Computer Science department's outreach program, I became an instructor to teach elementary students how to use an MIT animation tool, called Scratch. This experience has taught me how to be patient when teaching and also how to keep the sessions interesting so the topics do not become boring.

Undergraduate Teaching Assistant

Jan 2016 - Dec 2016, Austin-TX

My second year of undergrad I became a TA for an Undergraduate

Studies course that freshmen were required to take. Through this opportunity, I gained leadership skills with the help of a tailored seminar, as well as, mentoring incoming college students. The course looked at societal issues involving race in the US, and I mediated discussions in the classroom based on the lectures.

Academic Projects

Big Data Projects
Spring 2021, University of Texas at Dallas

Structured Streaming: Developed a spark application to retrieve Twitter data for sentiment analysis using kafka as a broker. The analyzed data was then visualized using ElasticSearch.

Data Ranking: Used Page-Rank algorithm to rank most popular US Airports. Used TF-IDF technique to create a search engine for movies.

Grocery Store Web Application
Fall 2020, University of Texas at Dallas

Developed a grocery store application using MEAN stack technologies. Implemented user login, product search, placing orders, and tracking order history.

Distributed Applications
Fall 2020, University of Texas at Dallas

Developed a MUTEX service in Java using Roucairol-Carvalho algorithm

Developed a distributed Java program that uses a synchronizer to allow each node in a system to compute its maximum distance to all other nodes in the topology

Database Engine
Spring 2020, University of Texas at Dallas

Implemented a basic database engine in Java that operates from the command line and API calls. Supported functionalities include CREATE table, INSERT and SEARCH records

Contact List Application
Spring 2020, University of Texas at Dallas

Wrote a script to store contact information from a CSV file into a MySQL database and developed a GUI using Java Swing library that allows a client to interact with the database.

Litmus-RT Video Application
Fall 2019, University of Texas at Dallas

Developed a real-time video processing app in a modified linux kernel using FFMPEG and SDL libraries.

Mininet Application
Fall 2019, University of Texas at Dallas

Developed a streaming application in a software defined network environment. The application consisted of a server, a renderer, and a client. I implemented a protocol in python where a client can request a server to stream a text file, which gets displayed on the renderer.

Data Science Projects

Various semesters

DQN: Recreated a Reinforcement Learning algorithm developed by Deepmind to play atari game Breakout. (Fall 2020)

GANs: Built a web scraper to extract song albums and artists from wiki. Used Spotify and Genius API to retrieve song lyrics and album art. Attempted to train a dataset using GAN models to generate artwork when some lyrics were fed into the model. (Fall 2018)

Android Projects

Various semesters, University of Texas at Austin

Apartmate: Created an app for roommates in software design class with a team. The app will keep track of chores, groceries and calendar between the roommates. (Spring 2018)

MapApp: Used Google Maps API to show maps/street view of an address. (Spring 2018)

WeatherApp: Used Dark Sky API to collect weather information and displayed it on the app. (Fall 2017)

Embedded Systems Projects

Various semesters, University of Texas at Austin

Weather Station: Implemented temperature sensor using I2C protocol on a custom PCB. Done in C using TI TM4C LaunchPAD. (Spring 2019)

TI-RSLK: Developed Simulink program for a robotics curriculum using C2000 launchpad [Spring 2019]

Car Game: Designed and implemented a car game on the TI TM4C launchPAD in C. The game was based on pole position, where one can accelerate, and move the car left and right to avoid obstacles, until the finished line was reached. (Spring 2016)

Digital Logic Design Final

Spring 2017, University of Texas at Austin

Encoded the Basys FPGA board with VHDL to act as a calculator. Showed values on the 7-seg display.

Skills

Computer-skills

- Languages:
    - Proficient in Java, C, Python
    - Familiar with Scala, Matlab, C++, Swift, Assembly
- Web: Html, CSS, Javascript, PHP
- Cloud: AWS, GCP
- Databases: Cassandra, SQL, MongoDB
- Libraries: Spark, Hadoop, OpenCV, Tensorflow, JUnit, Selenium, FFMPEG/SDL
- Technologies: Git, Kafka, MEAN stack
- OS: Windows, Linux, Unix
- Applications: Eclipse, Android Studio, Visual Studio, Xcode, Labview/Simulink

Soft-skills

- Event Planning
- Excel budgeting
- Team management
- Telemarketing

Presentations

Chase Secure Onboarding Showcase
2023-2024, Dallas-TX

Presented various applications within the Secure Onboarding team that I have worked on to wider Chase audiences during company wide showcases. I described the problem and solution that our team is tackling to better improve the customer onboarding experience.

UT Senior Design Capstone
May 2019, Austin-TX

Our senior design team presented a demo of our senior project at the ECE Spring 2019 Showcase. A year-long research and development proved fruitful in producing a Simulink software for Texas Instrument's Robotics Curriculum.

AP Cambridge Capstone Research Program
April 2015, Irving-TX

I presented a research paper on Social Engineering as per the diploma requirement for the AP Cambridge program.

Southwest Popular/American Culture Association
Feb 2015, Albuquerque-NM

I presented a research paper contrasting Hollywood filmography to that of Bollywood. I was able to attend the conference as part of my High School Cinema Club.

Activities

- Graduate Student Assistant, UTD
- Instructor, UTD CS Outreach
- Participant, Google DevFest
- Grader, Engineer Your World
- Participant, Leadershape Institute
- Hackathons: Hacktoberfest, GameJam, HackUTD
- Volunteer: Pi Sigma Pi Organization, Austin City Limits, Explore UT, SXSW, Texas Tribune, Longhorn Halloween, Habitat for Humanity

Honors and Awards

- Certificate of Completion, UTD IEEE Software Testing Contest
- UT Austin Bridge Scholar
- 1st place, Local Unrated Chess Competition