AMBER MOON HASAN

amber.hasan@gmail.com (214) 335-4653

EDUCATION

M.S. Software Engineering | GPA: 4.0	The University of Texas at Dallas	2023-2025
B.S. Computer Science | GPA: 3.9	The University of Texas at Dallas	2013-2017

- UTD's AES Honors Full Scholarship Recipient | Alumna of Computing Scholars Honors Program (CS Squared)
- Dean's List for three semesters, School of Engineering | Missed one question on the math portion of the SAT

RESEARCH CONTRIBUTIONS

Fixed Indices	Dr. Hal Sudborough and Dr. Sergey Bereg	Fall 2023 / Spring 2024

- Developed a Java program to optimize the runtime of a permutation polynomial.
- Utilized advanced data structures to enhance performance in large datasets.
- Collaborated with a team of researchers to identify computational bottlenecks.
- Conducted performance testing to ensure scalability across different input sizes.

Hamming Distances	Dr. Hal Sudborough and Dr. Sergey Bereg	Spring 2016 / 2017

- Wrote a Java program to calculate the Hamming distance between two binary strings.
- Implemented algorithm optimizations to handle large input sizes efficiently.
- Explored applications of Hamming distances in error detection and correction.
- Collaborated with peers to improve code quality and readability.

Electrical Engineering Counting Electrons	Dr. Bruce Gnade	Spring 2015

- Contributed to an assembly program that calculated electron flow in an electrical circuit.
- Worked closely with electrical engineers to align program logic with physical measurements.
- Analyzed the efficiency of the program and proposed improvements to reduce memory usage.
- Assisted in documenting code for future research and student use.

PRESENTATIONS

Undergraduate Research Presentation, UTD	Spring 2016

- Delivered a detailed presentation to an audience of researchers on our project related to Hamming Distances.
- Designed and created an informative poster summarizing the key aspects of our research.
- Addressed questions and facilitated discussions on the applications of Hamming Distances in error detection.
- Collaborated with team members to ensure clarity and accuracy in both the presentation and poster.

Talk on Computer Science Education, UTD	Spring 2017

Presented to over 200 high school teachers at the Computer Science Teachers' Association (CSTA)

- Discussed the importance of planning for success and how high school curriculum can prepare
- Provided educators with strategies for teaching core topics, insights on real-world applications of computing

HACKATHONS (Devpost: amber-hasan)

- Competed in final round of JP-Morgan's 2016 Code for Good, featured in the [Houston Chronicles newspaper](#)
- SafeGuard (Won Top 5): Mobile app with Google Maps API to display safe / unsafe areas for women to navigate
- DermaCare: Web app which connects Open AI to diagnose and improve acne skin conditions
- EcoSense: Web app connected with Google Charts API, Docker, Kafka to stream and visualize real-time energy data
- Home Readiness Calculator: Web app calculates a meter of readiness for user, uses MERN stack
- Home and Auto Care: Mobile app, connects to Python Flask API and React Native

CERTIFICATIONS

- 3 Certifications in Microsoft Azure, Terraform, and MuleSoft (API). Some experience in Kubernetes
- Hobbyist car mechanic. 525 Digital Multimeter (DMM) Certified, can change oil / battery / tire and other
- Several trophies and medals from Texas Music Association for piano from 6-12th grade
- Published several mobile apps to the Apple and Android app store in React Native and Firebase under my name

CORPORATE EMPLOYMENT

DevOps Engineer, Geico   Jan 2024-present
- Automated cloud infrastructure using Kubernetes and Terraform, improving deployment efficiency.
- Developed CI/CD pipelines and wrote PowerShell scripts to streamline deployment and automate tasks.

Mobile Developer, Shopify   April 2022-May 2023
- Added support for Bluetooth card readers to Shopify POS, using React Native Typescript and KMM
- Proficient in Git and GitHub for daily version control and collaboration needs
- Handle production issues during on-call shifts to maintain high levels of uptime and availability
- Supported Apple Tap to Pay, Android Tap to Pay, Offline Payments, and Card Reader Connectivity issues

Software Engineer, Microsoft   Jan 2022-February 2022
- Commerce and Ecosystem division in Cloud & AI (powers commerce for key businesses like Azure, Office 365)
- Commerce Partner & Seller Experience team, SQL databases and REST API frameworks
- Developed Model Driven Apps and Canvas Apps on Power Platform

Assistant Vice President, Bank of America   Feb 2021-Dec 2021
Senior Application Developer, Bank of America   Aug 2017-Jan 2021
- Certified in MuleSoft Integration and API Associate, using Anypoint Studio IDE
- Use Java to code Middleware REST and SOAP web services on IDE, IBM Rational Application Developer (RAD)
- CI/CD: Almost single-handedly moved code from uDeploy to the Horizon Platform in my team

Intern (Software Engineer), USAA   Summer 2016
Intern (Software Engineer), USAA   Summer 2015
- Used Java, Wicket, HTML, CSS to develop front end UI and backend services to create internal web application
- Implemented JUnit testing and Selenium testing | Worked in Agile environment, took Agile class, pair programming
- Used XML and Java for UI, functionality, and web services in Android for an application used by USAA members.

Intern (Software Engineer), Estech Systems, Inc. (ESI)   Fall 2015
- Debugged Android app sold to other businesses to manage internal phone calls efficiently; used Eclipse IDE

ACADEMIC / OTHER EMPLOYMENT

Discrete Math Tutor (Honors class), UTD   2014-2015
- Tutored students in set theory, graph theory, combinatorics, and proofs.
- Led group study sessions and provided one-on-one tutoring.
- Developed study materials and practice problems to aid learning.

Taekwondo Instructor (3nd degree black belt), Lee's US Taekwondo   2008-2015
- Instructed students in taekwondo techniques, forms, and sparring.
- Prepared students for belt testing and competitions.
- Led training sessions for various age groups from child to adult and skill levels.

Piano Instructor, Laura Seale's Piano Lessons   2013
- Taught individual lessons focusing on technique, music theory, and performance.
- Developed personalized lesson plans for students of varying skill levels.
- Prepared students for recitals and music exams.

Biology / Chemistry SI Leader, UTD   Fall / Spring 2015
- Facilitated supplemental instruction sessions for students in biology and chemistry courses.
- Clarified complex topics and promoted effective study strategies.
- Organized group study sessions and provided individual tutoring support.

SIDE WORK
- Traveled to England, France, Germany, Spain, Italy, Canada, China, South Korea, Japan, Malaysia, Thailand
- Play piano, guitar, banjo, ukulele, mandolin – I created mobile app "String Bar" to tune my instruments / view chords