

AMBER MOON HASAN

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EDUCATION

PhD Computer Science (Data Science track)	The University of Texas at Dallas	Grad: May 2027
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
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- 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
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- 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
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- 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
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- 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
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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](#))

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- 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

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- 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

MLOps Data Engineer Intern, EOG

May 2025-Aug 2025

- Automated cloud infrastructure using GitHub Actions, improving feature engineering, training, scoring efficiency.
- Cut 30 minutes from each experimentation run (about 50 runs per model), saving 2.5 weeks per project.

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 (3rd 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