

Aayesha Islam

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Education

University of Florida (UF) - Gainesville, FL

August 2021- May 2025

Bachelor of Science in Computer Science GPA: 3.9/4.0

- **GPA:** 3.9/4.0 | **Awards:** Dean's List (Fall 2021 - Spring 2023), Pearson Edexcel High Achiever Award (2019)
- **Relevant Coursework:** Operating Systems, Enterprise Software Engineering, Modeling and Animation, Data Structures and Algorithms, Discrete Math, Computer Organization, Object Oriented Programming (Java and C++)

Skills

Programming Languages: Java, C++, Python, Golang, SQL, ARM Assembly, HTML, CSS, Processing (Java), MATLAB

Other: REST API, MongoDB, Teradata, Snowflake, Regression Testing, Socket Programming, Power BI, GitHub, SFML, OOP, MS Excel, Scrum

Spoken Languages: English, Bengali, Urdu, Hindi, Arabic

Experience

Data Engineer Intern | Centene Corporation

May 2024- Present

- Developed **Full-Stack** Web App for Health Insurance Compliance Reporting Inventory, increasing data access efficiency by 30%
- Used Teradata, **Snowflake** Data Warehouse, and SQL for Backend, Python Flask for UX-focused Frontend, productivity rose by 45%
- Created interactive **Power BI** analytics dashboards and optimized **ETL** database design of inventory with 112,000+ data endpoints

Quality Assurance Software Engineer Intern | Sandvik Mining & Rock Technology

May 2023- August 2023

- Wrote 8 test scripts with **Python REST APIs** for embedded and software simulations for drilling rigs, testing efficiency rose by 25%
- Performed 120+ regression tests on manual and automated features, parameters, diagnostics, and functionalities in simulator and field
- Tested and resolved 45 assigned software tickets across 3 machine versions on company-wide Application Management Software
- Conducted functional tests and end-to-end tests on 10+ new features and presented analyzed results before software release

Teaching Assistant for Computer Architecture | Paid position at the University of Florida

January 2023- Present

- Led a 60-student weekly hour discussion section and taught pipeline/parallel processing, architecture, memory, hazards, RISC/CISC
- Assisted and created course material, assignments, projects, in-class lectures, exam questions, and graded exams and assignments
- Hosted weekly 2-hour office hour sessions answered questions about **ARM Programming** and debugging project code

Research Assistant in Hardware Security | University of Florida

August 2023- Present

- Researched Laser Fault Injection Vulnerability with Professor Domenic Forte, and automated display of LFI Fault Map using Python
- Developed a **Python** app to display a simulation map of faults in PG-TVD **Logic cells** using data from **Cadence Virtuoso**
- Collaborated with UF ECE department Graduate researchers to present my research every week to Professor Forte

Logistics Intern | Society of Asian Scientists and Engineers (SASE)

September 2022- December 2022

- Operated event with an attendance of 250 people and budgeted for diverse food options such as vegan and gluten free within \$300
- Handled merchandise sales and performed tasks such as taking stock, deciding prices, advertising, and delivering to 40 customers
- Audited expenses made by 7 committees and requested purchase orders from the SASE Bank account, resulted in 0% overcharges

Secretary (former Socials Chair) | Association of Computer Engineers (ACE) at UF

September 2022- Present

- Organized and advertised social events catered towards CS, CPE and other STEM major students to promote networking
- Corresponded with the Treasurer to procure budgets of over \$500 for organizational events and fundraisers

Adab Chair on Executive Board | Islam on Campus (IOC) at the University of Florida

August 2022- May 2023

- Administered event plans to ensure they are in accordance with the professional standards of Islam and the University of Florida
- Executed 25+ IOC speaker events, social and religious events with an attendance of 150 people of diverse cultures and ethnicities

Projects

Where's My Water! | UF A.I. Days Hackathon 1st Place

October 2023

- Won **1st place** with \$10,000 prize and Most popular project with \$1000 prize among 46 projects with 400+ participants in NVIDIA and Verizon sponsored AI Hackathon at the University of Florida
- Collaborated with Google Colab to build **Full-Stack** web app for Groundwater level prediction using Generative **A.I.**
- Developed interactive Folium World Map website using **Python Flask** and Google Earth Engine API to display color coded analyzed data
- Developed ML algorithm for 6k+ data points in Python using Tensorflow, Keras, and **NVIDIA SMI**, and AI Images with Stable Diffusion

TenWords | A Language learning Full-Stack Web App

May 2023

- Built a web app enabling users to master 7 languages by learning 10 words daily with interactive text and audio flashcards and quizzes.
- Utilized **Golang** and built a REST API in the Backend, **React** as the Frontend, and **MongoDB** as the database to store 3k+ words
- Developed MongoDB database to create user authentication server, store progress in words and quizzes, and manage 5k+ data points

SuperDuper | A Cosmetics Dupe Finder Algorithm

November 2022

- Built a Pairing Heap and MinHeap in **C++** to find affordable alternatives to expensive cosmetics from dataset of 100,000 options
- Designed program to have various cosmetics options such as makeup, skincare, and haircare and sorting ability by brand and rating
- Compared performance of Pairing Heap by analyzing time of execution and reduced search time complexity from $O(\log n)$ to $O(1)$

HodaHub | A Student Info Tracker for Hoda Sunday School

January 2022

- Taught 15 elementary age students Arabic and Islamic Studies for 5 hours weekly and coordinated with 3 teachers to make class materials
- Developed HodaHub, a Student Info Tracker, implementing a custom Doubly Linked List and 20+ functions for optimal performance using **C++**, templates, pointers, and OOP.