

**EDUCATION****Master of Science in Computer Science**, The University of Texas at Dallas, **GPA 3.23/4.00****Spring 2021****Relevant Coursework:** Machine Learning, Algorithm Analysis and Data Structures, Human Computer Interaction, Virtual Reality, Operating System Concepts, Discrete Structures, Computer Architecture**Bachelor of Technology**, Indian Maritime University, India, **CGPA 8.82/10.00****Spring 2019****SKILLSET**

<b>Frontend</b>	Angular.js, React.js, JavaScript, JQuery, AJAX, JSON, Bootstrap, SASS, EJS, HTML5, CSS3
<b>Backend</b>	Java 8, J2EE, Spring Boot, Spring Security, Spring MVC, Hibernate, JSP, Servlets, C, C#.NET, Express.js, Node.js, PHP
<b>Others</b>	Maven, MySQL, MongoDB, Android, Unity, VRTK, Git, Apache, Linux, Eclipse, Visual Studio, VS Code, Notepad++, Advanced REST Client, Adobe XD, Inkspace

**ACADEMIC PROJECTS****Implementation of Data Structures, Data Structures and Algorithm Analysis**

- Implemented dynamic array, linked list, stack, binary search tree, priority queue, heap, graph-directed and undirected, and hash table with linear and quadratic probing, Dijkstra's algorithm, DFS Topological ordering and a Spell Checker using Hash Table in Java.
- Tested linear and binary search, depth-first and breadth-first search, selection sort, bubble sort, heap sort, merge sort, quick sort and radix sort on small and large data using Java.

**Seeking Tutor Problem (Concurrent Programming), Operating System Concepts**

- A Multi-Threaded C program, where a student visits mentoring center to seek help from tutor.
- Implemented locks using semaphores and created threads for student, tutor and coordinator using Pthread library in C. Tested the program for 2000 threads successfully, without any deadlock.

**File System Checker, Operating System Concepts**

- A C program to check File System Consistency. Check for bad inodes, bad direct and indirect addresses, bad directory format, bad reference counts for files and bitmap mismatch.
- Implemented Depth-first search algorithm to scan through the directory structure. Discovered stack overflow when debugging using gcc, while running the DFS algorithm. Fixed the problem by making some space in stack by defining a global struct.

**Unix Shell, Operating System Concepts**

- Implemented a Command Line Interpreter(CLI) in C. The Shell named 'dash' runs in interactive as well as batch mode.
- The Shell has built-in commands, features like running parallel commands, output redirection to a file and excellent error handling.

**Implementation of Lottery Scheduler in xv6 OS, Operating System Concepts**

- Replaced round robin scheduler in xv6 kernel with lottery scheduler; implemented lottery scheduler algorithm in xv6 kernel.
- The project exposed critical aspects of the kernel of an operating system and levelled up the kernel programming skills in C.

**User Interface Evaluation, Human Computer Interaction**

- Examined the UT Dallas Coursebook website with respect to its design and usability. Evaluated the color scheme, readability, if the website is operable by just using the keyboard, navigation layout, and the way drop-down lists work in the guided search tab.

**3D Virtual Environment, Virtual Reality**

- Created a realistic virtual environment in Unity using Virtual Reality Toolkit (VRTK).
- Scaled the virtual objects and environment to realistic proportions using Unity Cube primitive.

**PERSONAL PROJECTS****Tweet-it**

- Web Application where users can signup/login and chat in an open environment. Implemented RESTful API.
- Technologies/Tools: Angular.js, Express.js, Node.js, MongoDB, JavaScript, Bootstrap, HTML5, CSS3, VS Code, Advanced REST Client.

**Student Catalog**

- Web Application to store student's information-ID, First, Last Name, e-Mail, Mobile, Courses & GPA. Login authentication for Admin.
- Admin can Access, Modify and Remove a students' record using a unique ID, and can also retrieve all records sorted GPA wise.
- Technologies/Tools used: Java, JSP, Servlets, MySQL, JavaScript, Bootstrap, HTML5, CSS3, Apache, Eclipse.

**Organise**

- Windows desktop application to organize your course materials, schedule and track events, add jobs/internships applied to, and maintain versions of resume. Fully developed using C#.NET in Visual Studio and MySQL as database.

**Portfolio website on React**

- React based portfolio and blogging website. Users can signup/login for free and post articles, comment, like and share other articles.
- Technologies/Tools: React.js, Express.js, Node.js, MongoDB, JavaScript, Bootstrap, HTML5, CSS3, VS Code, Advanced REST Client.

**EXTRA-CURRICULAR ACTIVITIES**

- Attended the **Web Application Design Workshop** at UT Dallas, Fall 2019.
- **Active Member** of Association of Computing Machinery, Artificial Intelligence Society and User Experience Club at UTD.
- **Co-Editor at Learn Ship Design**, a student initiative at Indian Maritime University, Visakhapatnam, 2015-19. ([ishipdesign.blogspot.com](http://ishipdesign.blogspot.com))
- **Volunteer** at 'Social Service Fair 2018' hosted by United Way in Visakhapatnam.
- **240 hours of Social Service** as a NSS Candidate (National Service Scheme, Govt. of India), 2015-17.