Kushagra Gupta

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Education

Master of Science in Computer Science, May 2021, GPA 3.23/4.00
The University of Texas at Dallas, Richardson

- Data Structures and Algorithms Analysis, Human-Computer Interaction, Virtual Reality, and Operating System Concepts.

Technical Skills

Languages: Java, C#, JavaScript, C, HTML5, CSS3, SAAS, XML
Frameworks/Libraries: ASP.NET, ReactJS, NodeJS, ExpressJS, Spring Boot
Web Development: JQuery, Ajax, JSON, JSP, Servlets, Bootstrap, MVC, REST API
Database/Servers: SQL Server, MySQL, MongoDB, Tomcat
Tools/OS: Azure DevOps, Linux, Unity (VR), Git, GitLab, npm, Visual Studio, Eclipse

Projects

Human-Computer Interaction, Spring 2020

- Rebate Form – Programmed a user-centric windows form application. Designed the UI for fast data entry. Applied OOP techniques and programmed the backend for File I/O, validation and feedback. Implemented List for data handling.
- Rebate Form Analytics – Programmed an application for Experimental UX analysis. Analyzed back keypress count, min., max. and average data entry time for fields, for one record, and between subsequent records. (C#.NET, Visual Studio, Git)

Virtual Reality, Spring 2020

- Created a VR environment with 3D sounds, and scaled it to realistic dimensions. (Unity, VRTK, Steam API)
- Programmed the Vive and VRTK controllers to implement a custom 3D Travel state machine and 3D manipulation techniques. (C#, Unity, Visual Studio, Steam VR, VRTK, 5UDE, HTC Vive)

Data Structures and Algorithm Analysis, Fall 2019

- Implemented a sorting algorithm for Linked List, a Binary Search Tree, Heap Sort algorithm, Dijkstra's algorithm, Topological ordering algorithm, and a Hash Table to program a Spell Checker, implementing OOP techniques, in Java.

Operating System Concepts, Fall 2019

- Seeking Tutor Problem – Coded a multi-threaded program in C. Implemented Priority Queue and Locks using semaphores.
- File System Checker – Implemented the Depth-First-Search algorithm to traverse the directory.
- Implemented the Lottery Scheduler algorithm in xv6 kernel.
- Unix Shell – Programmed a Command Line Interpreter with all functionalities.
  (C, Linux, QEMU, Vi editor, gdb, Pthread library, VS Code, Git, GitLab)

Capital One – Build a web app to help people pick the right restaurant, February 2020

- Wrote an Ajax call to Yelp's API to fetch nearby restaurant's data by passing location and cuisine inputs to Query string.
- Used Geolocation and Geocoding API to get user's location, and Maps JS API to populate markers on a map canvas.
  (JavaScript, JQuery, Ajax, HTML5, CSS3, WebStorm, Git) (Link: https://gkushagra.github.io/Find-ur-Resto/)

Personal Projects

- Trackit – Programmed a web portal based on MVC design to implement user registration, login, sessions, and logout. Defined the model for user data and connected the backend to MongoDB Atlas to save user credentials. The password is hashed before saving. (NodeJS, ExpressJS, JavaScript, EJS, Git) (Link: https://still-eyrie-27209.herokuapp.com/)
- Student Catalog – Programmed a responsive web application on MVC pattern to provide CRUD functionality in order to handle student profiles. (Java, JSP, Servlets, JDBC, MySQL, JavaScript, Bootstrap, HTML5, CSS3, Tomcat, Eclipse, Git)

Extra-Curricular Activities

- An active member of UX Club, ACM, and AI Society at UT Dallas, August 2019 – present.
- Successfully completed Web Application Design workshop at UT Dallas, November 2019.
- Volunteered at 'Social Service Fair' hosted by United Way in Visakhapatnam, October 2018.
- 240 hours of Social Service as NSS (National Service Scheme, Govt. of India) Volunteer, August 2015 – May 2017.