

Nishita Kharche

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Education

University of Utah

Master of Science in Computing - Graphics & Visualisation (Computer Science), GPA 3.77

Salt Lake City, Utah

Aug 2021 - Present

Relevant Courses: Algorithms and Analysis, Mathematics of Computer Graphics, Virtual Reality, Visualization of Scientific Data, Interactive Computer Graphics.

Cummins College of Engineering for Women, SPPU

Bachelor of Science in Information Technology, GPA 3.12 (WES Evaluation)

Pune, India

Aug 2014 - Oct 2018

Relevant Courses: Data Structures & Algorithms, Database Management, Internet Technology, System Programming, Cloud Computing, Machine Learning.

Experience

Scientific Computing and Imaging Institute

Research Assistant

Salt Lake City, Utah

Jan 2022 - Present

Creating Paraview plugins for big data visualization as a part of National Science Data Fabric.

Société Générale Global Solution Center

Software Developer

Bangalore, India

June 2018 - Jan 2020

Developed RESTful APIs using Spring Framework for business users to help them make adjustments and generate reports on the data warehouse. Created optimized teradata queries for frequently filtering millions of rows efficiently on multi joins.

TechPrimeLabs Pvt. Ltd.

Software Intern

Pune, India

Dec 2016

Developed a real-time monitoring interface to visualize streaming data for a client application using TypeScript, AngularJS and Scalable Vector Graphics (SVG).

Relevant Projects

Representative Isovalue Detection and Isosurface Segmentation

Python, C++

March 2021 - Present

Implementing a new measure on volumetric medical data to detect relevant iso-values using the published paper "*Representative Isovalue Detection and Isosurface Segmentation Using Novel Isosurface Measures*".

Treasure Hunt Game using Spatial Audio and Hand Gestures

Unity, Oculus, C#, JavaScript

Oct 2021 - Dec 2021

Created a game solely based on spatial audio outputs to help navigate through the maze without visual outputs which uses hand gesture as inputs to interact with the game. Due to the use of audio output instead of visual output, it is inclusive of people with visual impairment.

Energy Efficient VM Migration In Cloud Data Centers

Openstack, Python, MySQL, Java, Cloudsim

Oct 2017 - Apr 2018

The improved algorithm for node selection minimized the total number of migrations while considering CPU utilization. It selected source nodes and new destination nodes for migration. Cloudsim (simulation package in Java) was used to test large scale performance.

3D Model Botanical Dictionary using Augmented Reality (AR)

Unity, Blender

Mar 2020

A botanical dictionary that takes an image of a leaf as input through a camera lens to identify the tree to display its complete 3D model along with its properties. Made using basics of Unity and Blender.

Brick & Ball Game

HTML5 Canvas, TypeScript

Dec 2016

Modeled basic collision behaviour between a ball, bricks and the surrounding wall using HTML5 Canvas and TypeScript. Keyboard based interaction implemented for all of the levels.

Technical Proficiency

Languages : C++, OpenGL, GLFW, GLEW, MATLAB, C, Java, Spring framework, Javascript, TypeScript, AngularJS, HTML/CSS, HTML5 Canvas, Scalable Vector Graphics(SVG), Teradata, SQL, GLSL

Tools/Technologies : Unity, Oculus SDK, Jupyter, Git, XCode, Eclipse, Paraview

Awards

Economic Times Campus Star, 2017-18 : Runner Up (Challengers List), An ET program that recognizes and rewards India's brightest engineering minds

Impetus and Concepts, 2018 : 2nd Runner Up, A flagship technical competition held at P.I.C.T, Pune, India