Sowmiya Shubbarayan

Creative Technologist & Aspiring XR Designer

A creative young professional & Student aspiring to learning and becoming an XR Designer by combining my skills on Extended Reality(XR), Machine Learning(ML) and User Interface & User Experience(UI/UX). Looking forward to work on developing Immersive Experiences for Medicine & Education

sowmiya.shubbarayan@colorado.edu

sowmiya.netlify.app/

linkedin.com/in/sowmiya2805

github.com/sowmiya-2805

SKILLS

C# | Python | JavaScript | Unity 3D | Blender | AWS | Figma | Data Vizualisation | UI/UX | Computer Vision

EDUCATION

M.S. in Creative Technologies & Design

University of Colorado, Boulder

08/2022 - Present *4/4*

Courses

- Creative Code
- Design Foundations
- Introduction to Virtual Reality

B.E. in Computer Science & Engineering

College of Engineering, Guindy, Anna University

08/2018 - 05/2022 *8.32/10*

Courses

- Object Oriented Analysis Design
- Distributed & Parallel Programming
- Machine Learning & Computer Vision

WORK EXPERIENCE

Research Intern in Virtual Reality (VR)

IITM Research Park

02/2021 - 02/2022 *Chennai, India*

https://www.iitm.ac.in/research-park/iitm-research-park

Achievements/Tasks

- C# Scripting in Unity to simulate virtual experiences to train young surgeons for complicated surgeries without risking human life

Research Assistant (RA) & Teaching Assistant (TA)

Solarillion Foundation

04/2020 - 05/2022 *Chennai, India*

https://solarillionfoundation.org/

Achievements/Tasks

- Researched on Natural Language Processing(NLP) Techniques to classify Medical Fake News Detection at the early stages. Explored Computer Vision techniques to analyze urbanization trends/patterns via Satellite Imagery Analysis
- Guided & Graded juniors on the Python & Machine Learning (ML) basics. Responsibilities include suggesting improvements for assignments & Project topics

Web Designer & Developer

MARA Vascular & Interventional Radiology

02/2021 - 05/2022 *Oklahoma, United States*

https://maravir.com/

Achievements/Tasks

- Designed & Developed the website for the radiology centre and Deployed it in Amazon Web Services (AWS). Also worked on incorporating 3D Animations for patient education

PUBLICATIONS

Conference Paper

SOMPS-Net : Attention based social graph framework for early detection of fake health news

Author(s)

Prasannakumaran, Harish Srinivasan, Sowmiya Shubbarayan, Sri Gayatri Devi, Saikrishnan S

12/2021

Presented on the 19th Australasian Data Mining Conference

On account of the increased vulnerability of people to deceptive fake medical news, a graph-based network comprising of two components – Social Interaction Graph (SIG) and Publisher and News Statistics (PNS) is proposed. It significantly outperformed other state-of-the-art graph-based models by 17.1% and showed 79% certainty within just 8 hours of the news' broadcast(early deetction)

Conference Paper

SEMANTIC FRAMEWORK FOR QUERY SYNTHESISED 3D SCENE RENDERING

Author(s)

Sri Gayatri Devi, Sowmiya Shubbaryan, Jerrick Gerald

(Submitted)

International Conference on Digital Image Processing and Vision (ICDIPV 2023)

A complete scene understanding of a single-view image to generate 3D scene from indoor & outdoor pictures. This work uses a novel differentiable point cloud renderer to transform a latent 3D point cloud of features into the target view. Further, on querying the rendered scene, the target is generated using the Query network.

PROJECTS

Interactive Dashboard for network insights of personal LinkedIn profile (11/2022 - Present)

- A compelling dashboard built primarily using Charts.js (a javascript library) to demonstrate the quality and growth of LinkedIn network. The personal archived data is downloaded and processed with Python that is used for the data visualisation

Mobile Application Design for awareness & remote patient recovery during Pandemic (10/2022 - Present)

- Prototyping a mobile application (in Figma) with animations explaining COVID & its symptoms and provides facilities to connect Doctors for remote consultation. Incorporates essential Design concepts like Sustainability, Speculative Design and Designing from the margins

XR System to teach NeuroAnatomy (09/2022 - Present)

- Built in Unity, the XR System enables users to navigate and interact with 3D Brain simulations in AR & VR through C# Scripting. An evaluation section scores the understanding at the end with MCQ, Parts Identification & Overall Concept Summarisation

Generating 3D print models from biomedical images via Volumetric Image Segmentation (01/2021 - 05/2021)

- A workflow that utilises image segmentation (in Pytorch) to extract tumors from MRI brain scans and devises model for 3D printing

CERTIFICATES

C# Programming in Unity Game Development Specialization
Offered by the University of Colorado Systems in Coursera

BioMedical Visualisation
Offered by the University of Glasgow in Coursera

SUPPORTED CAUSES

Surgical Training without risking human lives | Quality Education | Wildlife & Corals Conservation

VOLUNTEER EXPERIENCE

Education & Sanitation programs Organizer

National Service Scheme (NSS)

09/2018 - 03/2022 *Chennai, India*

Tasks/Achievements

- Organized half-yearly awareness programs on Importance of Education & Sanitation in nearby rural areas (to Chennai, India)

INTERESTS

Wildlife Photography | Safari | Glass Painting