PROPOSED THESIS TOPICS IN COMPUTER SCIENCE

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EXPLORING CREATIVE DIRECTIONS IN COMPUTER SCIENCE

THE GOAL OF THESE PROPOSED TOPICS IS TO COMBINE TECHNOLOGY, VISUALIZATION, AND ACCESSIBILITY

FOCUS DOMAINS:

- SOFTWARE DEVELOPMENT & VISUALIZATION TOOLS
- EDUCATIONAL SIMULATIONS
- DATA STORYTELLING & SOCIAL AWARENESS

1. GRAPHICS FOR SOCIAL IMPACT AND ACCESSIBILITY: NARRATIVES OF ENVIRONMENTAL INEQUITY

Domain: Software Development / Data Visualization

Goal: Develop a web-based or interactive visual storytelling platform that highlights environmental inequalities (e.g., pollution exposure, resource access).

1. GRAPHICS FOR SOCIAL IMPACT AND ACCESSIBILITY: NARRATIVES OF ENVIRONMENTAL INEQUITY

Purpose: Promote public awareness and accessibility through digital storytelling and data visuals.

Techs: HTML5 Canvas, D3.js, Python Flask/React.

VISUAL PHYSICS LAB: INTERACTIVE MODELS FOR MECHANICS

Description

Domain : Educational Software Development

Goal: Create an interactive simulation platform for physics concepts (motion, force, energy).

VISUAL PHYSICS LAB: INTERACTIVE MODELS FOR MECHANICS

Description

Purpose: Enhance STEM learning by allowing students to visualize and manipulate physics experiments virtually.

Techs: Unity, Blender (for models), JavaScript (for interactivity).

ANIMATED SIMULATIONS OF SORTING ALGORITHMS: ENHANCING COMPUTER EDUCATION

Description

- Domain: Theoretical / Educational Software
- Goal: Develop visual algorithm animations to demonstrate how sorting works (Bubble, Merge, Quick sort).

5. ANIMATED SIMULATIONS OF SORTING ALGORITHMS: ENHANCING COMPUTER EDUCATION

Description

- Purpose: Help students understand algorithm efficiency visually and interactively.
- Techs: JavaScript/React, Python (Tkinter or PyQt), HTML Canvas.

THANK YOU