PRITHWEERAJ ACHARJEE PORAG

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Computer Science & Engineering student and mixed-media computational artist working across machine learning, GPU-accelerated graphics, and real-time web systems, with a focus on creative computation and research-driven real-world system design.

RESEARCH EXPERIENCE

Context-Aware Dialectal Arabic Machine Translation
Second Author | Dr. Fayeq Jeelani Syed, Univ. of Toledo
- Co-developed a context-aware Arabic MT system enabling explicit region and register control.
- Contributed to model architecture, rule-based data augmentation, and dialectal evaluation.

Bengali Fake News Detection Using Multi-Layered LSTM Ensembles
QPAIN 2025 (IEEE Xplore) | Dr. Abu Saleh Musa Miah, BAUST
- Designed a multi-layer LSTM ensemble for misinformation detection in Bangladeshi media.
- Achieved 82.43% accuracy through ensemble optimization and corpus-level evaluation.

KEY PROJECTS

Aesthetic Resistance
Real-Time Generative System (WebGL, GLSL, Next.js) | aesthetic-resistance.vercel.app
- Built a browser-based real-time generative system using custom GLSL fragment shaders.
- Engineered a dual-force GPU rendering model combining aesthetic attractors with time-driven distortion.

ConservaTwin
Museum Conservation Digital Twin (PLC Sim, Control Systems, WebSockets) | hmi-sepia.vercel.app
- Simulated multi-zone museum environment with closed-loop PID logic and Preservation Risk Index (PRI).
- Built a SCADA-style HMI featuring alarm handling, historical trending, and replay functionality.

Project Proctor
Handshake AI Fellowship (LLM Evaluation) | Feb 2026 - Present
- Authored gold-standard solutions and grading rubrics to benchmark LLM outputs.
- Identified reasoning errors and hallucinations in AI-generated responses under senior supervision.

TECHNICAL SKILLS

Programming: Java, Python, MATLAB, JavaScript (ES6+)
Graphics & GPU: WebGL, GLSL, GPU Rendering, Procedural Generation
ML & CV: YOLOv8, TensorFlow, Model Evaluation, Image Annotation
Systems & Web: PLC Concepts, PID Control, Digital Twins, Next.js, WebSockets, Vercel

EXPERIENCE & PRACTICE

Mixed-Media & Computational Artist
Independent Practice | instagram.com/prithwee____
- Create computational and mixed-media artworks integrating photography and algorithmic processes.

Ciao Bella, UT
Food Service Worker | Sep 2025 - Jan 2026
- Provided customer service and maintained cleanliness in a high-volume campus dining environment.

RECOGNITION & INVOLVEMENT

Finalist, Teravarna International Juried Art Competition, 2025
Champion, UTBSA Men's Badminton Tournament, 2024 & 2025
Member, AI / ML Club | Event Coordinator, BSA, University of Toledo