

RISHI BAGRI

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EDUCATION

Purdue University

Expected May 2029

B.S. Computer Science and B.A. Film & Video Studies

West Lafayette, IN

- **Relevant Coursework:** Object-Oriented Programming (Java), Programming in C, Discrete Mathematics, Linear Algebra
- **Upcoming (Fall 2026 – Spring 2027):** Data Structures & Algorithms, Computer Architecture, Systems Programming, Numerical Methods, Cinematography

EXPERIENCE

Computer Vision & Generative Models (CVGM) Lab, Purdue VIP

Jan 2026 – Present

Team Lead (promoted May 2026), advised by Prof. Yung-Hsiang Lu

West Lafayette, IN

- Lead an 8-person team building a Python pipeline that generates 3D piano performance animations from MIDI input, using the MANO hand model with vertex-driven animation in Blender
- Developed a smooth Euclidean-distance gradient method for finger-key contact detection, advancing the system from BVH raycasting toward SDF-based contact and learned ContactOpt-style optimization
- Own the Blender and downstream animation tooling, building automated mesh-processing and contact-detection systems

Deloitte India

Bengaluru

AI Intern

May 2026 – June 2026

- Built a real-time 3D avatar system using the MuseTalk model, extending an earlier 2D lip-sync prototype into a more complex production pipeline for enterprise chatbots
- Developed a multi-tenant dashboard with per-client avatar customization. *Tech: Python, PyTorch, OpenCV, MediaPipe, Multi agent architectures, Gemini API*

AI Intern

April 2024 – May 2024

- Built an AI tool converting long-form text into short-form video, generating cartoonized avatar clips with lip-synced narration. *Tech: Python, OpenCV, MediaPipe, Wav2Lip*

Freelance Video Editor

April 2020 – August 2025

Self-Employed

Remote

- Built a freelance editing practice across 50+ projects for 15+ international esports organizations and creators; produced a 6-part CFO profile series published on Moneycontrol

PROJECTS

StudyPilot | *Python, Ollama, Llama 3.1*

- Built a fully offline AI study assistant on Ollama / Llama 3.1 with subject-adaptive tutoring, spaced-repetition flashcards, a Pomodoro timer, and an ambient sound engine

VEDA | *React Native, Expo, React Native Reanimated, Expo Haptics*

- Built a cross-platform panic-response app (iOS, Android, Web via Expo) that detects panic episodes from wearable data and guides the user through box breathing and grounding exercises with synchronized haptic feedback
- Designed a multi-phase response flow (guided breathing, sensory grounding, cognitive reassurance) with smooth animations and a dark-mode-first interface

TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript

ML / Computer Vision: PyTorch, OpenCV, MediaPipe, NumPy

Web / Frontend: React, React Three Fiber, HTML/CSS, WebRTC

Tools: Git, Blender (Python pipeline), Ollama, DaVinci Resolve

LEADERSHIP & ACTIVITIES

CS Undergraduate Student Board, Purdue | Board Member & Mentorship Head

March 2026 – Present

- Shape department initiatives and community programming; head the Mentorship initiative and contribute to the Panels and Help Room initiatives

Purdue South Indian Association | Co-Head, Socials Committee

September 2025 – Present

- Plan and coordinate cultural and social events for a community of 300+ South Indian students at Purdue

Claude Builder Club, Purdue | Member

January 2026 – Present

- Build and ship rapid-prototype AI projects alongside a community of student builders

E-Karma | Co-Founder & CEO

June 2023 – May 2025

- Co-founded an e-waste collection platform connecting owners with responsible disposal; won 2nd place at TAPMI Biz Kids 2024 and the King Constantine Medal

PUBLICATIONS

Co-author, "The Predictive Diagnosis of Lung Diseases using AI," *EC Pulmonology and Respiratory Medicine*, October 2024