Abhinav Kuchhal

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PROJECTS

Retro OS   os-retro.vercel.app

Built a browser-based operating system simulating **10+ native applications** (Calculator, Notepad, etc.) with a draggable window manager. Optimized DOM operations to maintain **60 FPS** across devices.

Flappy Bird AI   ai-flappy-bird.vercel.app

Designed a neuro-evolutionary algorithm with a population size of up to **10,000 agents**. The AI achieves mastery in less then **15 generations**, consistently scoring **10,000+** points autonomously.

WORK EXPERIENCE

Independent Researcher — Stealth Startup (Remote)   Nov. 2025 – Present

Conducting market analysis across **5+ competitor platforms** to identify feature gaps. Interviewed **20 prospective users**, validating core problem statements and shaping an MVP roadmap with **3 key differentiators**.

Co-Founder — Cupertino Focus (Delhi)   Jan. 2024 – Aug. 2024

Co-founded a product-focused agency, delivering Figma-based designs and interactive prototypes for **5+ clients**. Led ideation, UX flows, and early product validation for mobile applications.

TECHNICAL SKILLS

Languages	JavaScript, TypeScript, Python, Java, C, HTML, CSS
Frameworks & Libraries	React, Next.js, Node.js
Infrastructure & Databases	Docker, Kubernetes, PostgreSQL

PUBLICATIONS

Making ViTs Practical: Efficient Designs and Edge Deployment Strategies   Certificate Link

First Author — Manipal University Jaipur — Unpublished. Authored a review paper on reducing computational and memory overheads for deploying Vision Transformers (ViTs) on resource-constrained edge devices.

EDUCATION

Manipal University Jaipur   Sep. 2023 – Jun. 2027
B.Tech in Computer & Communication Engineering   *7.71 CGPA*