



Nikhil Yadav

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B.Tech

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🐙 GitHub Profile

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EDUCATION

- **Motilal Nehru National Institute of Technology Allahabad** 2028
B.Tech in Electronics and Communication Engineering CPI: 8.73
- **Patanjali Rishikul, Prayagraj** 2023
Board: CBSE (Class XII) Percentage: 94%
- **Patanjali Rishikul, Prayagraj** 2021
Board: CBSE (Class X) Percentage: 96%

CERTIFICATIONS

- **Machine Learning by Andrew Ng — Coursera** Online
Completed Dec 2024 – Mar 2025
 - Verify [here](#)
 - Learned foundational concepts of Supervised and Unsupervised Learning
 - Implemented algorithms including Linear Regression, Logistic Regression, and K-Means Clustering
- **MATLAB Onramp - MathWorks** Online
Completed March 2025
 - Self-paced introductory course on MATLAB programming and data visualization

PERSONAL PROJECTS

- **CoPilotX – Multi-Agent AI Startup Workspace** July 2025
AI agents (CEO, CTO, CMO, CFO) collaborate in a Slack-like UI to help users build and grow startups.
 - Website [Link](#)
 - Tech stack: React, Vite, LangChain, LangGraph, Google Gemini, Mermaid, Markdown, PPT APIs
 - Designed agents with distinct roles (e.g., CEO as orchestrator) using LangGraph + ReAct workflows.
 - Implemented export system to auto-generate ZIP packs with business plans, slides, logos, and tech specs.
- **StorageCube – Smart Cloud Storage Platform** June 2025
Built a secure and modern cloud storage app with file management, real-time insights, and Stripe payments.
 - Website [Link](#)
 - Tech stack: Next.js, Tailwind CSS, MongoDB, Cloudinary, Stripe, JWT, Nodemailer
 - Implemented OTP-based auth, file upload/share/rename, and usage tracking with media previews.
 - Integrated Stripe for plan upgrades with webhook support and responsive UI using Lucide React.
- **Contextual File Searcher (MCP)** May 2025
Developed a Model Context Protocol (MCP) tool for intelligent file discovery based on semantic and keyword relevance.
 - Repo [Link](#)
 - Tools & technologies: Python, Sentence-Transformers, PyPDF2, Openpyxl, FastMCP, JSON
 - Enables contextual search across local drives using natural language prompts.
 - Supports diverse formats (.pdf, .docx, .xlsx, .txt, code files) with unified text extraction and scoring pipeline.
 - Computes hybrid relevance scores using semantic similarity, filename matching, and keyword frequency.
 - Optimized with multi-threading and depth-limited recursive scanning for performance at scale.
- **Bridge Ball – Unity Arcade Game** June 2025
Created a reflex-based arcade game in Unity where players rotate bridges to guide a rolling ball across dynamic platforms.
 - Repo [Link](#)
 - Tech stack: Unity, C#
 - Designed smooth forward movement with interactive rotating platforms controlled by arrow keys.
 - Implemented increasing difficulty and minimalistic UI for addictive cross-platform gameplay.

• QuickVault

March 2025

A secure file sharing web app allowing users to upload and share files with custom link feature.

- Website Link
- Tools & technologies used: Next.js, React, Tailwind CSS, Cloudinary, MongoDB Atlas, GitHub Workflows
- Supports grouped file uploads with a custom link that remains valid for 10 days and provides 1 GB total storage per group.

• Captcha Cracker

Jan 2025

Built for Turing's Playground (Weekend Code) event, achieving 96% accuracy in CAPTCHA recognition.

- Repo Link
- Tools & technologies used: Python, TensorFlow, Keras, OpenCV
- Awarded 1st position among first-year participants.
- Developed image preprocessing pipelines and trained a convolutional neural network to recognize distorted text.

• SkySprint

Feb 2025

A minimalist 2D endless arcade adventure featuring one-tap controls and dynamic aerial challenges.

- Playable demo
- Developed using Unity to create smooth physics-based gameplay with realistic momentum.
- Implemented procedurally generated obstacles with scaling difficulty for endless replayability.
- Designed a score tracking system to monitor player progress and encourage competition.
- Optimized for cross-platform play on both PC and mobile devices.

• Zesting - Online Chat Application

Dec 2021

Real-time chatroom application enabling peer-to-peer communication over IP and port.

- Repo Link
- Tools & technologies used: Python, Kivy, Socket, Threading
- Designed and developed a real-time chatroom application that facilitates seamless two-way communication. Features a responsive user interface built using Kivy and supports multiple connections through socket and threading.

TECHNICAL SKILLS AND INTERESTS

Languages: Python, C, C++, HTML5, CSS3, JavaScript

Developer Tools: VS Code, Git, GitHub, Unity, Docker, Jupyter Notebook, Google Colab

Frameworks/Libraries: MERN Stack, Next.js 15, FastAPI, Tailwind CSS, Vite, LangChain, LangGraph, TensorFlow, Keras, OpenCV, Kivy, KivyMD

Cloud/Databases: Vercel, Cloudinary, MySQL, Stripe Webhooks, ChromaDB

Protocols & APIs: JWT Auth, OTP via Nodemailer, RESTful APIs, Model Context Protocol

Soft Skills: Team Collaboration, Time Management, Problem Solving

Coursework: Machine Learning, Data Structures and Algorithms, Object Oriented Programming, Digital Electronics, Signals & Systems

Areas of Interest: Computer Vision, Deep Learning, AI Agents, Full Stack Web Development, Automation

ACHIEVEMENTS

• Second Place – Hacktivate (Robotics Club)

Apr 2025

Awarded second place by developing SafeStrider, a full-stack ML system for classifying safe/un-safe zones and optimal patrol routes.

• First Place – Turing's Playground (Weekend of Code)

Feb 2025

First place among first-year participants by developing CaptchaCracker, a deep learning-based CAPTCHA-solving tool capable of extracting distorted alphanumeric characters with high accuracy.

• First Place – RoboSoccer (Avishkar, Robotics Club)

Nov 2024

Designed and built a DIY RoboCar with my team and secured 1st place in the RoboSoccer event held as part of Avishkar, organized by the Robotics Club.