

# Kanik Pathak

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## EXPERIENCE

### Project Trainee (Deep Learning)

Bhabha Atomic Research Center (BARC) Mumbai

April 2024 - July 2024, Mumbai

- Developed a **deepfake video detection system** leveraging neural networks and GPU acceleration.
- Trained architectures such as **ResNeXt-50**, **ResNext-100** and **EfficientNets** architectures from scratch using a frame by frame classification method, achieving 86% validation accuracy.
- **Reduced training time by 60%** through optimization (mixed-precision training , gradient accumulation and optimized data pipeline) Nvidia A100 GPUs.
- Improved detection accuracy by refining hyperparameters and testing multiple models.

### Frontend Intern (ReactJS)

Clinical AI Assistance

December 2023 - February 2024

- Worked from Design to Deployment of the website using React.js, Figma, and NodeJs, resulting in a 30% user interaction.
- Developed responsive components using Figma and React for enhanced usability.
- Optimized the UI by integrating key components, improving user interaction and accessibility for seamless navigation using Figma.
- Collaborated across teams to ensure website functionality and efficient performance, leading to a subsequent improvement in load time.

## SKILLS

**Languages:** C++, JavaScript, Python.

**Tech Stack:** Web Development- React, Python, Pytorch, Machine Learning, Deep Learning, Artificial Intelligence.

**IDE:** VS Code.

## PROJECTS

### TaskMaster Pro

[letstodo.vercel.app/](https://letstodo.vercel.app/)

- **Technologies Used:** React, CSS, JavaScript

#### Key Features:

- Intuitive interface for seamless task management.
- Pomodoro timer for improved productivity and focus.
- Task prioritization and categorization functionalities.
- Customizable notifications for breaks and reminders.

### Dynamic Portfolio Showcase

[kanikpathak.vercel.app/](https://kanikpathak.vercel.app/)

- **Technologies Used:** HTML, CSS, JavaScript, React, Vite, FramerMotion, ReactHooks

#### Key Features:

- Animated UI for enhanced user engagement.
- Responsive design for optimal viewing on all devices.
- Integrated sections for skills, projects, and contact information.
- Deployed on [Hosting Platform] for live access.

### Deep Fake Detection System

Bhabha Atomic Research Center (BARC), Mumbai • April 2024 - July 2024

- Developed a deep fake detection system utilizing advanced deep learning techniques for frame-by-frame video analysis.
- Trained on a dataset of 10,000 videos with an average length of 3 minutes.
- Achieved an accuracy improvement from 58% to 86% using optimization techniques, including gradient accumulation and mixed precision training.
- Implemented a user-friendly interface for real-time detection and result visualization, enhancing digital media authenticity and combating misinformation.

## EDUCATION

### Master of Computer Applications

Banaras Hindu University • Varanasi • 2024 • 8.24

**BSc.(Hons) Mathematics**

Jamia Millia Islamia • New Delhi • 2022 • 9.17

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**CERTIFICATIONS**

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**Data Science for Engineers**

NPTEL

- It provides a strong foundation in data analysis, machine learning, and statistical methods, which are crucial for solving real-world engineering and business problems using data-driven approaches.

**AI-Data Scientist 6 months course by NASSCOM**

- It helped my understand the fundamentals of Artificial Intelligence also to brush up my core knowledge on Artificial Intelligence
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