

# Aritra Bera

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in [linkedin.com/in/aritra-bera](https://www.linkedin.com/in/aritra-bera) 🐙 [github.com/ceres2808](https://github.com/ceres2808) 📁 [Portfolio Website](#)



## Education

### IIT (ISM) Dhanbad

Bachelor of Technology in Electrical Engineering (CGPA: 7.97 / 10.00)

Expected May 2027

Dhanbad, Jharkhand

- **Relevant Coursework:** Computer Programming, Data Structures and Algorithms, Object Oriented Programming, Probability and Statistics

## Projects

### Electronics & IoT Club – Official Website | Next.js, React Router, Tailwind CSS, Supabase

[Repo](#) 🐙 | [Link](#) 🔗

- Developed a responsive, full-stack website for the Electronics & IoT club using Next.js and Tailwind CSS, which now serves as the club's official online presence and central hub for news and activities.
- Integrated Supabase for secure, scalable data storage, enabling efficient retrieval, management, and dynamic display of club information such as events, members, and achievements.
- Implemented SEO best practices and deployed the website, achieving top 4 Google rankings for 5+ keywords, as verified by Google Search Console.

### Connect 4 AI Agent | Python, NumPy, PyTorch, Stable-Baselines3, OpenAI Gym, kaggle-environments

- Designed and trained a neural network-based reinforcement learning agent to play Connect Four using the Proximal Policy Optimization (PPO) algorithm, achieving a win rate of 68% against a random agent.
- Implemented a custom Gym environment for Connect Four, including state representation, action space, and reward shaping for effective agent training.
- Developed a convolutional neural network (CNN) architecture for processing game board states and predicting optimal moves.

### Pathfinding Algorithm Visualizer | Unity, C#

[Repo](#) 🐙

- Developed a Unity-based visualizer for pathfinding algorithms (A\*, Dijkstra's) on randomly generated mazes with dynamic start and end points.
- Implemented efficient maze generation and algorithm visualization to demonstrate real-time path computation.
- Enhanced user experience with clear visual feedback and interactive controls for exploring different maze configurations.

## Technical Skills

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

**Technologies & Frameworks:** Next.js, React, Supabase, PostgreSQL, MySQL, Git, GitHub, TensorFlow, Pytorch, Unity

**Concepts:** Data Structures and Algorithms, Object Oriented Programming, Deep Reinforcement Learning

## Certifications

- TensorFlow Keras Bootcamp – Certificate of excellence, from OpenCV university | [🔗](#)
- Intro to Game AI and Reinforcement Learning – Certificate of completion, from Kaggle | [🔗](#)
- The Complete Full-Stack Web Development Bootcamp – Certificate of completion, from Udemy | [🔗](#)

## Achievements

- Qualified as a KVPY fellow - secured All India Rank 642 in the SA stream for the year 2021-22
- Accomplished excellence in the National Talent Search Examination-2021

## Social Engagements

**Technical Lead** at Electronics and IoT Club

**Club Member** at Animation and Game Design Club

**Contingent Member** for IGDC ps (game development) at Inter IIT Tech meet 13.0 (2024)

**Member** at Electrical Engineering Society   **Volunteer** at Conetto'23 (Tech-fest)