BHARAT MISHRA

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EDUCATION

- **Bachelor of Technology, VIT Bhopal University** | Computer Science Engineering | CGPA: 9.13   [2023 - 2027]
- **Grade XII, Vidyatree Modern World School** | Percentage: 95.50   [2021 - 2023]

SKILLS

- **Programming Languages:** C/C++, Python, Java, SQL, MySQL
- **AIML Libraries & Frameworks:** Scikit-learn, Pandas, Matplotlib, PettingZoo, Streamlit, Tensorflow, OpenAI Gym
- **AI core competencies:** Deep learning, Reinforcement learning(Q-learning, PPO, Actor-Critic, Deep Reinforcement learning), Computer vision CNN, NLP, Generative AI (LLMs, prompt engineering), predictive analytics
- **Developer Tools:** GitHub, Git, MySQL, Docker

AI & Machine Learning Projects

- **Search and Rescue Reinforcement Learning System**
    - Designing RL-based autonomous agents for search and rescue in disaster-affected areas
    - Implementing Q-learning and PPO algorithms to optimize pathfinding in dynamic environments.
    - Training models in a custom-built multi-agent simulation environment using PettingZoo. .
- **MSMEs E-Commerce Platform with Integrated AI**
    - Developed an AI-driven fraud detection model that achieved **87% accuracy** in flagging fraudulent transactions for small and medium-sized businesses
    - Engineered predictive analytics models with **90% accuracy** for sales forecasting and inventory management
    - Implemented vendor risk assessment algorithms, increasing buyer trust and transaction security.
- **Deep Q-Network (DQN) for cartpole**
    - Implemented Developed and implemented a Deep Q-Network (DQN) from scratch to achieve an average score of 300 for 2000 consecutive episodes in the CartPole balancing task using OpenAI Gym.
- **CNN for Fashion-MNIST classification**
    - Developed and trained a Convolutional Neural Network (CNN) to classify images from the Fashion-MNIST dataset
    - 91% accuracy in both training and validation, showing minimum overfitting and solid generalisation
- **CyberSecurity AI Web Extension for Child Safety**
    - Developed an AI-powered browser extension to detect malicious links, at **85% accuracy**
    - Created for a **state-level Police CyberSecurity Hackathon** to enhance child safety online.

Technical Achievements & Certifications

- **Kaggle/Google certified GenAI training:** Completed an intensive Generative AI program, gaining a Kaggle badge for proficiency in Large Language Models (LLMs), prompt engineering, and transformer architecture
- **Competitive Programming:**
    - **TCS CodeVita(2024):** Advanced to the penultimate round by solving complex algorithmic problems, achieving a Global Rank of 8261.
    - **100 Days of Code:** Consistently solved daily DSA problems over a 100-day period to strengthen foundational skills..
- **Certifications:**
    - Introduction to Natural Language Processing (NLP) (Issued by Infosys)
    - Google: Bits and Bytes of Computer Networking (Issued by Google)
    - Fundamentals of AI & ML (Issued by VITyarthi)
    - Introduction to Data Science (Issued by Infosys)
    - Graph theory and programming (Issued by AlgoVerse)
    - Python Essentials (Issued by VITyarthi)
    - Computer Vision 101

Leadership and Volunteering

- **PR and Outreach, Startup club:** Establishing industry partnerships by coordinating with CEOs, CFOs, and professionals for guest lectures and sponsorship, demonstrating professional networking and relationship building.
- **Volunteer, Pahal Foundation:** Taught basic mathematics and fundamental elementary education to underprivileged children.