**BHARAT MISHRA**

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# Computer Science student specializing in Artificial Intelligence with a foundation in building end-to-end systems. Proven ability to engineer custom Reinforcement Learning environments from scratch and deploy Generative AI tools to solve real-world data extraction problems. Eager to apply these skills to tackle challenges in autonomous systems and NLP.

# 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]

# TECHNICAL SKILLS

* **Programming Languages:** C/C++, Python, Java, SQL
* **AI/ML Libraries & Frameworks:** Tensorflow, Scikit-learn, Pandas, Matplotlib, Streamlit, OpenAI Gym
* **Developer Tools:** GitHub, Git, MySQL, Docker

# AI & Machine Learning Projects

* [**DepoIndex: AI-Powered Legal Document Indexing**](https://github.com/Bharat269/DepoIndex)
  + Engineered an AI-powered tool to automate the generation of a table of contents from legal deposition PDFs, significantly reducing the manual effort required for document analysis.
  + Designed an efficient preprocessing pipeline that annotates text with precise page and line numbers, minimizing prompt token count while enabling the LLM to extract topics with accurate source references.
  + Achieved **95% page-level and 85% line-level accuracy** in topic referencing through manual validation, delivering a highly reliable tool for automated document indexing.
* [**Search and Rescue Reinforcement Learning System**](https://github.com/Bharat269/ProjectExhibition-2-Search-Rescue)
  + Developed autonomous agents using Q-learning and PPO to optimize pathfinding in a dynamic, multi-agent search and rescue simulation.
  + **Engineered the simulation environment and its core physics from scratch**, defining the complete state space, action space, and reward functions for the RL agents.
  + Achieved an approximate **90% reduction in target search time** for the trained agent compared to a random-walk baseline.
* [**MSMEs E-Commerce Platform with Integrated AI**](https://github.com/Bharat269/Project-Exhibition-MicroMart)
  + Engineered an AI-driven fraud detection model using RandomForest classifiers, achieving **87% accuracy** by analyzing transaction patterns, IP geolocation, and billing/shipping address mismatches
  + Built a sales forecasting model using a TensorFlow neural network to predict inventory needs, achieving **90% accuracy** by analyzing historical monthly sales data to identify seasonal shifts.
* [**CyberSecurity AI Web Extension for Child Safety**](https://github.com/Bharat269/Malicious_links_model)
  + Developed an AI-powered browser extension that detected malicious links with **85% accuracy** as part of a competitive, **state-level Police CyberSecurity Hackathon** focused on child safety.

# Achievements & Certifications

* + **Global Rank 8261, TCS CodeVita (2024):** Advanced to the penultimate round in a global coding competition by solving complex algorithmic problems.
  + **Generative AI Training (Kaggle/Google):** Completed an intensive program on LLMs, prompt engineering, and transformer architecture, earning a Kaggle-issued badge for proficiency.
  + **Google Certified: Computer Networking:** Earned the "Bits and Bytes of Computer Networking" certification issued by Google.

# Leadership and Volunteering

* **PR and Outreach Lead, Startup Club: Secured industry partnerships for guest lectures and sponsorships by coordinating directly with C-suite executives (CEOs, CFOs) and other industry professionals.**
* **Volunteer, Pahal Foundation:** Taught basic mathematics and fundamental elementary education to underprivileged children.