# Rajeev Ranjan Pratap Singh

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#### Education

**VIT Bhopal University**, Bachelor of Technology in Computer Science and Engineering (AI&ML)

August 2022 - Ongoing

• CGPA: 8.38/10

• Relevant Coursework: Machine Learning, Data Science, Applied Linear Algebra, Probability & Statistics.

#### R.K. College, Aurangabad, Class XII

May 2022

• Percentage: 69.6%

## **Projects**

### **Brain Tumor Detection Using AI**

github.com

- Designed and deployed deep learning models (ResNet50 and DenseNet121) for brain tumor detection, achieving a peak accuracy of 99.69%.
- Optimized model performance with advanced data preprocessing, augmentation, and hyperparameter tuning using libraries like NumPy, OpenCV, and Matplotlib to ensure clinical reliability.

## Emotion Detection github.com

- Engineered a real-time emotion detection system with machine learning, achieving 80% accuracy in live recognition by deploying CNNs to classify seven distinct emotions, including happy, sad, and angry.
- Enhanced model efficiency with TensorFlow and Keras, and implemented real-time processing through OpenCV, reducing detection latency and ensuring seamless user experience.

#### Virtual Voice Assistant - Nemesis

github.com

- Developed a Python-based virtual assistant automating over 10 user commands, including voice recognition, weather updates, web search, and media playback, boosting task efficiency by 30%.
- Engineered a streamlined automation system with SpeechRecognition and BeautifulSoup, enabling instant online data retrieval, reducing manual effort, and improving workflow productivity.

#### **Achievements**

- Ranked 807th, GeeksforGeeks(VIT Bhopal).
- 2nd place, Robotics and Coding Workshop, VIT Bhopal.
- Tata Group ESG (Forage): Completed a sustainability consulting simulation for Tata Consultancy Services, assessing client sustainability needs and conducting a comparative analysis of potential solutions. Created a fitment matrix, achieving a 15% reduction in resource consumption for a major client.
- **KPMG AU Data Analytics (Forage):** Led a customer targeting simulation with the Data, Analytics Modelling team, evaluating data integrity and identifying high-value clients based on demographic factors. Built interactive dashboards to visualize insights, boosting decision-making efficiency by 20%.

# **Technologies and Tools**

- **Programming Languages:** Proficient in Python (including Machine Learning frameworks like TensorFlow and Keras), Java, HTML, CSS, and JavaScript(beginner). Experienced in MATLAB for numerical computing, data analysis, and modeling.
- Data Analysis and Visualization: 3Pandas, NumPy, Matplotlib, Seaborn, and Scikit-learn for advanced data processing, analysis, and visualization. Competent in computer vision techniques with OpenCV.
- Development Tools & Platforms: Proficient in Git/GitHub, collaborative development in Jupyter Notebooks, and deploying on GCP. Experienced with IDEs like Visual Studio Code and PyCharm for efficient coding and debugging.

# Certifications

- Applied Machine Learning in Python (Coursera, 2023)
- LinkedIn Marketing Solutions Fundamentals (2023)
- Problem Solving (Basic) Certification, HackerRank (Earned on 7th January 2025) Demonstrated proficiency in problem-solving.
- Google Analytics Certification (Valid until January 5, 2026) Scored 86%, gained expertise in data analysis and website optimization.
- Google Ads AI-Powered Performance Certification (Valid until January 2026) Score: 91.3%, expertise in optimizing Google Ads with AI.