Pranav Kamate

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LinkedIn Profile

Summary

Motivated and detail-oriented Bioengineering student with strong foundations in data science, genomics, and healthcare technologies. Skilled in research, data analysis, and problem-solving with hands-on experience in academic projects such as cancer genomics, deep learning for pneumonia detection, and healthcare-focused data models. Eager to apply technical and analytical skills in biotechnology, bioinformatics, or data science roles to contribute to impactful solutions in healthcare and research.

EDUCATION

Year	Degree	Institute	CGPA/%
2022 - 2026	B.Tech	Vellore Institute of Technology, Bhopal	8.10 CGPA
2022	12th Maharashtra State Board	Devchand Collage, Arjunnagar	74.83%
2020	10th Maharashtra State Board	Mohanlal Doshi Vidyalaya, Arjunnagar	91.80%

PROJECTS

- **Phytoremediation Using Seedballs** *October 2024- December 2024*
  - Implemented an eco-friendly project that used phytoremediation to address soil and water pollution through the use of innovative seedball technology.
  - Demonstrated a 33 % reduction in heavy metal concentrations over a 12-month case study on a 40 square meter contaminated site.
  - Focused on key areas such as creating seedball formulations, developing deployment strategies, and monitoring the growth of plants and the quality of the soil.
- **Deep Learning Solutions for Early Pneumonia Detection** *January 2025- February 2025*
  - Achieved 97.21 % accuracy and 0.982 AUC using a custom CNN on 5,856 X-ray images, outperforming InceptionV3 and ResNet50.
  - Improved generalization by applying 40 % dropout in convolutional layers; boosted accuracy by 2 %.
  - Optimized inference to 122 ms/image for real-time diagnosis in low-resource settings.
  - Enhanced model robustness via GAN-based augmentation, 150-epoch training, and hyperparameter tuning.

COURSES AND CERTIFICATIONS

- Bits and Bytes of Computer Networking (Coursera) – Jan 2024 : Certificate
- The Joy of Computing Using Python- (NPTEL): Certificate
- MongoDB Database Admin Path (Self-Managed): Certificate

TECHNICAL SKILLS

- **Programming Languages:** Python, SQL.
- **Python Libraries:** Pandas, NumPy, Scikit-learn, TensorFlow.
- **Databases:** MongoDB
- **Web Technologies:** HTML
- **Laboratory Techniques:** DNA Extraction, Biochemistry, Streaking, General Lab Work.
- **Software:** MS Office Suite (Excel, Word, PowerPoint)

EXTRA CURRICULAR ACTIVITIES AND ACHIEVEMENTS

- **Active Member, FYI Club** *2022 - 2024*
  - Collaborated with club members to successfully plan and execute three campus events over a two-year period, including intra-college gaming competitions.