NAYAN BEBALE

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PROFILE SUMMARY

Innovative **Python Developer** and **AI Enthusiast** with expertise in building scalable web applications, optimizing AI/ML models, and developing IoT-driven patented solutions. Proven track record as a **Hackathon Finalist**, Research **Co-author**, and **Placement Coordinator**, with experience in designing systems that enhance user engagement and operational efficiency.

EDUCATION

Garima Vidya Mandir H. S. School   Indore, Madhya Pradesh, India
Higher Secondary School   *June 2020 - July 2021*
Percentage: 79.6

Sage University Indore   Indore, Madhya Pradesh, India
BTech Information Technology   *August 2021 - June 2025*
CGPA: 8.36

TECHNICAL SKILLS

Languages: English, Hindi, Marathi
Programming Languages: Python, SQL

Libraries: PyTorch, Tensorflow, gRPC, OpenCV, Ultralytics, Pandas, Numpy, Matplotlib,

Web Technologies: Django, Flask, Rest API's, HTML, CSS, JavaScript, Bootstrap
Database: MySQL, SQLite, DjangoORM
Courses: OpenCv Bootcamp, 100 Days of Code: Python Pro Bootcamp, Databases with Python.

WORK EXPERIENCE

Machine Learning Intern   *Sep 2024 - Present*
IIT Indore, Indore, India
- **Project:** *"Object detection service for Autonomous Vehicles"*
- Developed and optimized object detection models (e.g., YOLO, Faster R-CNN, SSD) to **enhance accuracy, reduce latency**, and improve **energy efficiency** and **response time**.
- Integrated **gRPC for microservices**, enabling scalable and **real-time communication** between **object detection services.**
- **Deployed and evaluated 55 object detection** and **200 segmentation models**, analyzing **CPU usage, optimizing memory consumption**, and enhancing system performance.
- Tuned model parameters to achieve optimal **detection performance** across various hardware environments, balancing **energy consumption** and **speed**.

Machine Learning Intern   *June 2023 - Oct 2023*
Sage University Indore, Indore, India
- **Project:** *"Realization of Image in 3D using Holoportation for Human Brain System into 3D Anatomy."*
- **Algorithm Research & Development:** Conducted **extensive research** on various **algorithms** for **point cloud processing**, contributing to the **development of a 3D brain model with a 72% accuracy rate**.
- **Volume Rendering:** Implemented **volume rendering techniques** to convert **2D MRI datasets into 3D Model**, enabling **better visualization of the human brain system in 3D.**

PROJECTS

CineMatch - Personalized Movie Recommendation App   *Ongoing*
- **Developed** a movie recommendation system leveraging **M.L.** for **personalized suggestions**, integrating **TMDb** and **YouTube** APIs for **real-time movie data** and **trailer previews**.
- **Enhanced platform engagement** by implementing a **blogging feature**, enabling users to **write and share articles** on cinematic topics, fostering a **community-driven experience**. [Link](#)

SmartSaver - Best Mutual Funds for You   *Feb 2024 - March 2024*
- **Developed a platform** for **middle-class families** to identify **top-performing mutual funds with 92% accuracy**.
- Integrated **financial tools** like the **50-30-20 income split calculator** and **SIP calculators for age-based investment planning**. [LINK](#) [GitHub](#)

Udyog Sarthi - AI-powered Web Platform for Disability Inclusion *Sep 2023 - Dec 2023*
- **Developed a platform** to connect **disabled individuals** with **education and job opportunities**.
- **Boosted user engagement by 40%.**Reduced data breaches by 15%.Provided personalized **course recommendations**, **job suggestions,** and **content delivery.**

RESEARCH EXPERIENCE

- **"Machine Learning and Artificial Intelligence in Object Detection: Applications and Future Emerging Trends in Technologies".**
  - Authored by **Dr. Jitendra Saxena,** Co-authored by **Anushka Chouhan**, and **Nayan Bebale**.
  - Accepted for presentation at the **39th Indian Engineering Congress, 2024**.
  - Published by the Department of Computer Technology, Sage University, Indore.

PATENT

- **"System and Method for Automatically Generating an Application Platform Based on User's Requirements Using IoT".**
  - **Patent Number:** 2023210258
  - **Issued Date:** 12 May 2023
  - **Filed By:** Sage University, Indore
  - **Role:** Team Leader
    - Led the team in designing, architecting, and implementing the patented system.
    - Oversaw the end-to-end process, including ideation, development, and integration of IoT-based solutions to automate application platform generation.

AWARDS AND SCHOLARSHIPS

- **Finalist, Smart India Hackathon (SIH) 2023**
  - Recognized among top teams in a national-level hackathon, demonstrating innovative problem-solving and technical skills.
- **Finalist, Hack'dore 2024**
  - Achieved finalist position in a competitive hackathon, showcasing proficiency in software development and teamwork.
- **Silver Medal, Best Poster Competition**
  - Awarded for excellence in presenting research findings, reflecting strong communication and analytical abilities.

EXTRACURRICULAR ACTIVITIES

- **Placement Coordinator, Sage University, Indore**
  - Organized recruitment drives and facilitated communication between students and potential employers, enhancing placement opportunities.
- **Event Organizer, College Technical Fest**
  - Coordinated technical events and workshops, fostering a collaborative learning environment and promoting student engagement.
- **Participant, Innovation, Design, and Entrepreneurship (IDE) Bootcamp – Phase II** *Jan 2024 - Feb 2024*
  - Organized by the **Ministry of Education's Innovation Cell (MIC) & AICTE** at **Symbiosis University of Applied Sciences, Indore**.
  - Gained hands-on experience in **entrepreneurship, innovation strategy, and product design.**