Akshay Bhat

Bachelor of Engineering
Artificial Intelligence and Machine Learning
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 GitHub Profile
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TECHNICAL SKILLS

-Languages: C++ | Python | C | JavaScript | SQL | HTML | CSS
-Frameworks: React.js | Next.js | Tailwind | Flask | TensorFlow | Scikit-learn
-Tools: Git | Google Colab | GCP | Jupyter Notebook | MongoDB | MySQL | SQLite | Vercel | Render
-Course Work: Data Structures | Databases | OOP | Computer Architecture | Machine Learning

PERSONAL PROJECTS

- **CareBridgeAI** ↗ | *Python, RAG, Pinecone, SciSpaCy, React, Next.js, Flask*   *Sept 2025*
  AI-powered platform for immediate healthcare support and consultation simulation.
  – Engineered a scalable **RAG pipeline** indexing **250,000+ medical dialogues**, utilizing **SentenceTransformers** for dense retrieval and **SciSpaCy** for entity extraction to enable high-precision semantic search.
  – Developed a comprehensive support ecosystem featuring **symptom-driven facility discovery**, **financial accessibility filters**, and **environmental safety insights** to optimise access to healthcare and humanitarian resources.

- **Alphawave** ↗ | *Python, BERT, LSTM, Linear Regression, React, Next.js*   *Nov 2025*
  Comprehensive Fintech & EdTech platform for stock analysis and trading simulation.
  – Engineered a real-time analysis pipeline using **BERT** (sentiment) and **LSTM** (forecasting), ensembled via **Linear Regression** to generate actionable risk scores.
  – Built a gamified ecosystem featuring virtual money trading, 1v1 competitions, and **trading psychology** mini-games to test emotional discipline.

- **FabrAIc** ↗ | *Python, PyTorch, ResNet50, Flask, Pandas*   *Aug 2025*
  Intelligent visual search engine for personalized wardrobe management and outfit discovery.
  – Architected a **Multi-task ResNet50** on the **DeepFashion dataset**, implementing a custom training pipeline with auxiliary heads (50 categories, 25 attributes) to learn robust **2,048-dim visual embeddings**.
  – Engineered a **vector search system** indexing **289,000+ images** via **cosine similarity**, integrated with a **Flask** backend to execute real-time **content-based retrieval** of the top-5 visually similar apparel items.

- **MoodQuest** ↗ | *EfficientNet-B0, PyTorch, OpenCV, Flask, Next.js, MongoDB*   *Nov 2025*
  Real-time facial expression recognition and mental health monitoring platform.
  – Secured **6th Place (National)** at a hackathon by delivering an MVP in **48 hours**, utilizing a fine-tuned **EfficientNet-B0** on the **FER-2013 dataset** with transfer learning and data augmentation to maximize accuracy.
  – Developed a wellness ecosystem featuring real-time stress analysis and standard clinical assessments (**PHQ-9, GAD-7, PSS**) visualizing longitudinal mood trends via interactive Next.js dashboards.
  – Engineered a scalable architecture using **Flask** and **MongoDB** to handle video stream inference and user data.

- **HackArena** ↗ | *Python, Flask, MongoDB, OAuth, Jinja2, Render*   *March 2025*
  Full-stack platform for seamless hackathon hosting and team management.
  – Developed a centralized management platform for team formation, registration, and submission tracking using **Jinja2** templating for dynamic frontend rendering.
  – Integrated **Google OAuth** for secure authentication and deployed the fully **containerized application** on Render for public access.

POSITIONS OF RESPONSIBILITY

- **Web Developer & UI Designer, AeroBMSCE Club**
  Designed UI/UX wireframes and design-to-code workflows for the club's web interface.   *2025-Present*

- **Organizing Committee Volunteer, Utsav (Cultural Fest)**
  Coordinated on-ground logistics and event operations.   *March 2025*

ACHIEVEMENTS

- **Top 6 Finish** at AiVerse 2.0 Hackathon   *Oct 2025*
  Placed top 6 out of 100 teams in a 48hr Hackathon and engineered "MoodQuest," a real-time emotion detection system using PyTorch & OpenCV.

- **Top 15 Finish** at Phaseshift Tech Fest '25 Hackathon   *Sept 2025*
  Selected as a finalist from a pool of 125 teams in a 24hr Hackathon and built "CareBridgeAI," an all-in-one multi-lingual support ecosystem featuring a fine-tuned medical AI assistant for refugees.