YASH SHAH

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EDUCATION

SVKM's Dwarkadas Jivanlal Sanghvi College of Engineering, Mumbai, India **Expected: June 2025**
Candidate for Bachelor of Technology in Artificial Intelligence and Machine Learning **(CGPA 9.25/10)**

SVKM's Shri Bhagubhai Mafatlal Polytechnic, Mumbai, India **June 2022**
Secured a Diploma of Computer Engineering with *Distinction* **(GPA 9.04/10)**

PROFESSIONAL EXPERIENCE

Parfum Field, Mumbai, India **June 2024 – September 2024**
AI Software Engineer
Parfum Field is a distinguished fragrance company offering an extensive and diverse portfolio of premium perfumes, demonstrating a deep commitment to innovation in the fragrance market.

- Developed an AI-powered perfume recommendation system, leveraging machine learning algorithms to analyze customer preferences and scent profiles, driving personalized recommendations and enhancing overall customer satisfaction
- Devised advanced predictive analytics frameworks to accurately extrapolate emerging market trends, significantly bolstering data-driven strategic decision-making
- Collaborated cross-functionally with marketing and product development teams to align technical innovations with business strategies, contributing to an improvement in operational efficacy and product-market fit

Intellisys, Mumbai, India **June 2021 – August 2021**
Website Designer and Developer
Intellisys is a private limited company that specializes in developing websites, applications, and various software solutions delivering cutting-edge digital services to meet the needs of their clients across different sectors.

- Built responsive websites using HTML5, CSS3, and JavaScript, ensuring seamless functionality across different devices and browsers
- Implemented advanced design concepts with tools such as Figma; collaborated with teams to deliver engaging UI/UX experiences
- Collaborated closely with cross-functional teams and implemented innovative design concepts while adhering to industry best practices and client specifications

ACADEMIC PROJECTS AND PAPERS

Project AI-Driven ADHD Diet Recommendation System (*Research Paper Under Review*)

- Developed a personalized AI system for ADHD dietary recommendations using multi-modal data (PDFs, user profiles, fridge images). Designed an interactive Q&A interface for real-time meal plan customization using clinically relevant data.
- Engineered a hybrid RAG pipeline achieving 90.4% retrieval precision for medical documents and 92.6% accuracy in meal generation
- Integrated Bio BERT-based NER, LLaMA-3 Vision for fridge analysis, and Deep Seek LLM for adaptive, age-specific plans.
- Technologies: RAG (BM25, Sentence Transformers, Cross-Encoder), Llama Index, Bio BERT, LLaMA-3 Vision, Deep Seek LLM, PyMuPDF, OpenCV, Qdrant, Python

Real-Time RAG-based Local AI Document Search Agent

- Engineered a fully local document question-answering system using Crew AI and Groq LLM, enabling fast, contextual interactions with offline documents without external dependencies.
- Designed an intelligent fallback mechanism that triggers web scraping via FireCrawl when information is unavailable locally, ensuring comprehensive and accurate responses by dynamically incorporating external sources.

- Implemented a modular architecture supporting multi-turn, conversational interactions with documents, optimizing for relevance, speed, and seamless fallback execution.
- Technologies Used**:** Crew AI, Groq LLM, FireCrawl, RAG architecture, Qdrant (vector DB), Python, LangChain, Fast API

Autonomous AI Book-Writing Agent System

- Built a fully autonomous agentic system that plans, writes, edits, and tracks book chapters using a specialized multi-agent Crew AI framework.
- Applied **RAG and memory chains** for factual consistency and long-form narrative coherence.
- Enabled version-controlled GitHub commits with contextual memory across sessions.
- Delivered full-length books autonomously, demonstrating advanced long-context LLM orchestration.
- Technologies: Crew AI, Gemma2 LLM, Lang Chain, RAG, GitHub API, Python

Vital Voice: AI-Driven Health Diagnostics

- Led the development of an intelligent multi-modal chatbot application using Python and Streamlit for the user interface and backend. Integrated LLM models such as Llama3 and Tesseract for OCR, designed to provide personalized medical guidance, improving accessibility for users seeking diagnostic advice
- Directed the integration of multi-modal input capabilities, allowing users to interact through text, voice, and document uploads for a more flexible and comprehensive healthcare experience
- Utilized technologies such as Llama3, Python, Tesseract, Wav2Vec, FPDF and Pdf2image to enhance disease detection, automate report comparisons and generate downloadable health summaries

Enhancing Recommender Systems: A Hybrid Approach for Precision Matchmaking in Digital Environments

- Engineered a hybrid matchmaking system using collaborative filtering and ML, optimizing recommendations via real-time user behavior analysis and feedback loops
- Authored and published a paper on the same in the International Journal of Intelligent Systems and Applications in Engineering in 2024, proposing a novel hybrid recommender system model for matrimonial websites

TECHNICAL SKILLS

- Programming languages: Python, C/C++, Java, SQL, NoSQL (MongoDB)
- Web & App Technologies: HTML5, CSS3, JavaScript, Figma, Node.js, Flutter (Dart)
- AI/ML & Data Science: Machine Learning (Supervised & Unsupervised Learning, Model Evaluation), Natural Language Processing (Text Classification, NER, BERT, GPT), TensorFlow, PyTorch, Keras, OpenCV, Recommendation Systems (Collaborative Filtering)
- Cloud & DevOps: AWS, Docker, Kubernetes, CI/CD (Jenkins)
- Version Control & Collaboration Tools: Git, GitHub

COURSES AND CERTIFICATIONS

- Generative AI with Large Language Models, DeepLearning.AI & Amazon Web Services, October 2024
- Natural Language Processing with Classification and Vector Spaces, DeepLearning.AI, December 2024
- Fundamentals of Accelerated Computing with CUDA C/C++, NVIDIA, September 2024
- Unsupervised Learning, Recommenders, Reinforcement Learning, DeepLearning.AI & Stanford Online, September 2024
- Supervised Machine Learning: Regression and Classification, DeepLearning.AI & Stanford Online, June 2024
- Flutter and Dart: The Complete Guide [2023 Edition], Udemy, August 2023
- C++ Programming, SVDTII, March 2021

EXTRACURRICULAR ACTIVITIES

- Served as a Co-committee member in the Infotech Web and Application section of the DJS SigAi student chapter under DJS ACM; contributed to organizing hackathons and coding competitions, while also designing and developing a cross-platform application using Flutter and Dart (2023)
- Acted as a Coordinator at Shri Bhaghubhai Mafatlal Polytechnic for two years, overseeing cultural events by managing logistics and fostering collaboration among student teams (2021-2022)