KABEER AHMED MERCHANT

Pune, Maharashtra, India

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Education

Savitribai Phule Pune University   **Nov. 2022 – Aug. 2026 (Expected)**
Bachelor of Engineering in Artificial Intelligence and Data Science, Second Year GPA - 9.05   *Pune, Maharashtra*

Competitive Exams   **June 2020 – August 2022**
JEE Mains - 91%ile (99%ile in Physics), MHCET - 96%ile (99%ile in Physics)   *Pune, Maharashtra*

City International School   **Sept 2020 – Aug. 2022**
CBSE, 12th Standard - 80.2%   *Pune, Maharashtra*

Hutchings High School and Junior College   **June 2009 – May. 2020**
ICSE, 10th Standard - 96%   *Pune, Maharashtra*

Relevant Coursework

- Data Structures and Algorithms
- Software Engineering
- MIS
- DBMS
- Artificial Intelligence
- Internet of Things
- Operating Systems
- Computer Graphics
- Computer Networks
- Web Technologies
- Human Computer Interaction
- Discrete Math
- Statistics
- Engineering Math

Experience

Existence   **Feb 2022 – Present**
Co-Founder   *Pune, Maharashtra*

- Co-founded a startup that is focused on building innovative products and providing optimum customer satisfaction through tailored development services.
- Currently developing Sentient - a personal AI with agents and memory.
- Manage a team of 7 people that includes developers, designers and researchers.
- Developing technical skills such as the application of full stack web and app development, AI, etc. for product development along with nontechnical skills like team management, leadership skills, administration, project management, client acquisition, social media marketing, hypothesis testing, market research and more.

Projects

Sentient | *Python, NextJS, TailwindCSS, ElectronJS, Neo4J, FastAPI, Langchain, Flower*   **Oct 2024 - Present**

- Sentient is your personal and private AI with agents and memory. It is a fully local AI companion that features extensive integrations with your favorite tools and memory that allows it to learn more about you over time.
- Sentient is a desktop app built with ElectronJS and Python and features a fully custom orchestrator-based pipeline for agents and memory that we developed in-house. It also has additional features like internet search that allows Sentient to query the web for any info it needs, with plans for many more features in the future.
- Sentient uses a personality test based on the Myer-Briggs Type Indicator to understand the personality of the user. This is used along with data pulled from a user's social media profiles to create a knowledge graph about the user. This graph is maintained by Sentient and used to personalize responses.
- v1.3 of the app includes full integration with GSuite (Gmail, GDrive, GDocs, GSheets, GSlides, GCalendar), a custom memory pipeline to create and maintain a knowledge graph about the user along with LinkedIn, Reddit and X integrations to pull personal data about the user for profile creation.
- Sentient is available for download today - check out the website for a live web demo, download info, release pipeline and more. sentient.app

Project Vaayu | *Python, Jupyter Notebook, Image Segmentation, Machine Learning, PyTorch*   **Oct 2024 - Present**

- Developed a UNet++ based solution for Image Segmentation of Drone Orthophotos for the Ministry of Panchayati Raj.
- Worked with GIS data in software like QGIS. Designed and implemented a custom pipeline to generate training data for image segmentation models from hi-resolution drone imagery and vector data.
- Successfully implemented and open-sourced the expected solution. Trained ML models for segmentation of buildings, roads and water bodies from drone orthophotos.
- Project Vaayu is open source and can be viewed on GitHub. GitHub Repository

Bloomify | *Python, NextJS, TailwindCSS, MongoDB, Docker, FastAPI, Vercel, Mistral, QLoRA*   **Feb 2024 - Present**

- Developed a chatbot-based solution for assessment creation based on Bloom's Taxononmy for modern educators.

- Features include - Classification of questions into their cognitive levels (Bloom's Taxonomy Levels), Transformation of questions from one Bloom's Level to another and Generation of full assessments using inputs like syllabus, marking scheme, average Bloom's level and more.
- Conducted research by analyzing more than 21,000 questions from engineering question papers and developed a novel process for generating assessments that test a wider variety of cognitive skills than current assessment techniques. The research work led to a patent being published, and a research paper is also in the process of being published.
- This project is currently deployed live and is being used by some engineering colleges in Pune for assessment creation. Check it out here. bloomify.app

MindSync | *NextJS, TailwindCSS, MongoDB, Gemini API, OCR, Speech to Text, Vercel, GitHub* **April 2024 - Oct 2024**
- Currently creating a web-based platform for creating mindmaps quickly and conveniently.
- Users can add any information - text (users can type or add text from a Word doc, PDF or PlainText file), images, audio, video.
- Multimodal input options allow users to add textbooks, handwritten notes, video or audio lectures and convert everything to a mindmap in a single click.
- All this can be accessed and used via an easy-to-use and modern web-application that is powered by NextJS, TailwindCSS and MongoDB.
- The web platform allows users to save maps online, edit them completely online using code or even by simply sending messages with the necessary changes and/or extra multi-modal information that they want to add to the mindmap.
- This project is currently in the Alpha phase and can be accessed at: mindsync.app

FinAdvise | *Python, NextJS, TailwindCSS, MongoDB, FastAPI, Vercel, Mistral, Selenium, LangChain* **July 2024 - Oct 2024**
- Developing an AI-based Financial Advisory platform for young professionals.
- Features include - AI-enabled personalized financial advice, news aggregation for financial updates with personalized watchlists, expense tracking with trend analysis and integration of Chartered Accountants and Investment Consultants into the platform for the creation of an all-in-one financial ecosystem.
- Conducted research on various financial concepts such as ETFs, mutual funds, investment portfolio creation, risk appetites and so on.
- This project is currently under development. View a product demo and join the waitlist here: finadvise.app

Team Squadrone | *Python, Raspberry Pi, Mission Control, OpenCV, Radio Communication* **April 2024 - Present**
- Worked on the autonomous flight system for an Unmanned Aerial System.
- We participated in prestigious competitions like the Society of Automotive Engineers (SAE) India's Aerothon 2024.

Gemini2Blend | *Python, Generative AI, Gemini API, Blender, 3D* **March 2024 - March 2024**
- Gemini2Blend is a simple Blender addon that enables users to interact with Google's Gemini Large Language Model (LLM) directly within Blender.
- With this addon, users can quickly ask questions, clarify doubts, or seek assistance without the need to switch between different applications, streamlining their workflow and enhancing productivity.

Recognizing Handwritten Digits using Deep Learning | *Python, Keras, Deep Learning, Machine Lerning* **Sept 23 - Sept 23**
- Implemented a Keras Deep Learning Model to label handwritten digits from the MNIST dataset.
- This notebook was my submission to the MNIST competition on Kaggle and I got a score of 0.99053 for it. View the original notebook here: Kaggle Notebook

Other Projects | *Various Skills/Tools* **Completed**
- Created a 3D Tic-Tac-Toe Game in Unreal Engine to explore game development. Also created some basic FPS Games and worked on in-game AI.
- Created a full-stack bus-pass booking and ticket management system. Used Python, Flask, SQLite.
- Created a comprehensive event management system developed to streamline event organization and attendance tracking. This project was initially created to manage events at a college, providing features for both attendance tracking and food coupon management using QR-code based electronic passes.
- Worked on JalMitra, which was an idea for a mobile app that my team and I worked on for the Smart India Hackathon. The app was meant to be a digital solution for water-related problem reporting and efficient management of issues along with expenditure tracking and resource management. Included AI models for issue prioritization that could potentially make administrative work easier and more efficient.
- Created a simple, animated toll-gate simulation using pure C++ and OpenGL.
- Manage my own trading portfolio that I grew by 110% over a period of 2 years.
- Created a Python Script that automatically downloaded (from reddit), formatted (fixing dimensions for posting to Instagram) and re-uploaded images (to Instagram) as a project to research automatic content creation. Used Python.
- Used wget in Python to create a script which could pull the stock data for current date, specified date or date range. The program included logic which could modify the downloading URL depending on the date/dates entered. Used Python.

Technical Skills

Languages: Python, NodeJS, TailwindCSS, C++, MongoDB, SQL, Arduino, Java
Developer Tools: VS Code, Jupyter Notebooks/Google Colab, Project IDX, Unreal Engine, VMWare, Oracle Virtualbox, QGIS
Technologies/Frameworks: NextJS, ElectronJS, Flask, React, GitHub, Docker, Kubernetes, Linux (Ubuntu, Kali Linux), cybersecurity tools (Metasploit framework, Wireshark, nmap), TensorFlow, Langchain, FastAPI, Vercel, ngrok, Arduino, Raspberry Pi, System Design
Project Management: Microsoft Office, Google Docs, Jira, Trello, Slack, Asana, Discord
Others: Blender, After Effects, Premiere Pro, Photoshop, Waveform Free

Leadership / Extracurricular

Hirameki Japanese Language Classes
Studying Japanese

January 2023 – Present
Pune Vidyarthi Griha's College of Engineering and Technology

- Currently studying N3 Level Japanese.
- Passed the JLPT N5 with 140/180 marks.
- Passed the JLPT N4 with 104/180 marks.
- Can read, write and converse in Japanese.

Hackathons
Team Leader/Team Member

November 2022 – Present
Pune Vidyarthi Griha's College of Engineering and Technology

- Participated in various hackathons as an engineering student.
- Notable Achievement - Reached the finals of Smart India Hackathon 2024 with Project Vaayu, held @ Coimbatore in December 2024. Placed 2nd All-India.

Entrepreneurship Development Cell
Content Development Head

April 2024 – Present
Pune Vidyarthi Griha's College of Engineering and Technology

- Hosted and ran a series called Udaan: The Entrepreneurial Journey on Instagram.
- Lead the content development team that consists of video editors, script writers and more.
- Cover topics like entrepreneurship, startups, case studies, finance and more on the show.

Volunteering Experience
Team Leader/Team Member

November 2022 – Present
Independent

- Volunteer with organizations like the Pune Blind Men's Association.
- Assist the visually impaired by providing services as a scribe and also help them out wherever possible. (for example, filling forms, creating resumes, etc)

Codestreak
Content Creator

September 2020 – Present
Independent

- Run a content outlet under Existence where we post tech content for thousands of people from all around the world. We have viewers from countries around the world with most of our viewers on YouTube in Jan 2025 coming from India, the US, UK, Turkey and Germany.
- We create both informative and entertaining videos. Videos are posted to Instagram and YouTube.
- youtube.com/Codestreak

YouTube Channel
Content Creator

September 2020 – Present
Independent

- Run a personal YouTube channel where I discuss various topics like technology, science, programming and more.
- Developed my public speaking skills.
- youtube.com/Kabeer2004