PRADHYUMNA PRAKASH

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EDUCATION

High School Graduating June 2026

Delhi Public School, Bengaluru East, Karnataka, India
SAT Score: 1550 (760 - English, 790 - Math)
Relevant coursework: AP CSA - 5/5, AP Calculus BC - 5/5

PROFESSIONAL EXPERIENCE

Adiyen Technologies Private Limited, Bengaluru, Karnataka: Full-Stack Web Intern 11th Grade

- Developed a real-time, browser-based multiplayer chess application for a US-based stealth-mode client using **MIT-licensed NGX-Chess-Board**
- Utilized **AngularJS** to develop the user interface; integrated the chess logic
- Built session management and backend using **Node.js**
- Implemented **Websocket-based** communication for real-time game synchronization
- Demonstrated a strong foundation in full-stack development, real-time system design, and adaptability in a dynamic, startup-oriented environment

Moniger, Lagos, Nigeria: Data Science, AI/ML and Backend Engineer 12th Grade

- Selected as company's **first** intern
- Developed an AI-powered expense categorization engine affecting **5k+ users**
- Handled ML, NLP, API and user-facing customization tools to classify expenses while allowing users to tailor to their personal needs
- Ensured accuracy, speed, personalization, scalability, and user trust
- Delivered progress updates in **twice-weekly** team meetings

ACADEMIC RESEARCH AND PROJECTS

ML-based Ocular Disease Identification Research 11th-12th Grade

Researched the effectiveness of Machine Learning in identifying and classifying ocular diseases

- Developed, tested, and compared **3 supervised Convolutional Neural Network models** to classify **8+** ocular diseases
- Achieved **90.77** percent accuracy in identifying 4 classes, **97.9** percent accuracy in Diabetic Retinopathy Recognition
- Developed a **K-Means Clustering Algorithm** that clusters ocular diseases present within fundus images
- Demonstrated that K-Means Clustering isn't effective in large, unbalanced datasets
- Paper published in the **National High School Journal of Science Flagship** (acceptance around 1 percent).

Sanskrit-scripture-based RAG System Research 12th Grade

Analyzed the effectiveness of Sanskrit-based RAG systems in answering reflective questions

- Developed and analyzed **Retrieval-Augmented Generation (RAG) systems** connected to Sanskrit scriptures; Analyzed effectiveness in answering philosophical, interpersonal, intrapersonal, and therapeutic questions
- Systematically rated and compared answers to reflective questions with **faithfulness, relevance, helpfulness, and clarity metrics**
- Evaluated the effects of 1) stronger LLMs and 2) increasing the retrieval-value, in improving RAG systems
- Published in the IJARIIT - International Journal of Advance Research, Ideas and Innovations in Technology **(Impact Factor: 6.078)**.

SwastiAI 11th-12th Grade

Created a therapeutic chatbot application that provides key insights from ancient Sanskrit scriptures.

- Founder and developer of SwastiAI, a therapeutic chatbot platform based on Sanskrit philosophy.

- Used Python to pre-process **100k+ Sanskrit verses from the Bhagavad Gita and the Itihasa**; Stored data in a **FAISS database**; Developed a **Retrieval-Augement Generation system** based on the FAISS database as back-end; Utilized **Web-development and API logic** to create the front-end application
- Engaged **250+ users** from India and US with >98 percent positive feedback
- Invited to join **MadhwaGPT (Non-profit GPT based on Madhwa philosophy)** after presenting SwastiAI to the cofounder

CollegenceAI 11th-12th Grade

Created an AI agent that aids students in the US college application process.

- Founder and developer of CollegenceAI, **an AI agent that aids students applying to US colleges** by providing personalized advice for the user's profile
- Developed database of **140+ programs and internships, 100+ colleges, and 80+ scholarships for 5+ countries** and integrated with agent through **N8N Workflow**
- Created a system to connect to the user's **Google calendar and Airtable databases** to store deadlines and new activities
- Presented product at **Elevate21 (OneYoungIndia and Flame University hosted program)** to faculty and students with overwhelmingly positive response.

ACTIVITIES - EXTRA DETAILS

Published Author 12th Grade

Published "Enter Your Prompt: Understanding Large Language Models and RAG Systems" on Amazon

- Authored and published a book on **LLMs and Retrieval-Augmented Generation Systems**
- Wrote **85+** pages of concepts and code, taught alongside real-world projects inspired by my previous work
- Authored concepts on the process and mathematical foundations of Large Language Models (**tokenization, embeddings, tranformers, hypertuning, etc.**)
- Published in Amazon KDP (Kindle Direct Publishing); Achieved **Amazon Best Seller (Kindle, free)** for categories: Computer Science, Mathematics, Computer Mathematics.

Elevate21 11th-12th Grade

Member of Elevate21: 21st-century skill building program hosted by OneYoungIndia and Flame University

- Contributor, Debater, Researcher at Elevate21
- Engaged and led teams in **geopolitics, economics, business, and AI debates and projects**
- Analyzed the effects of **AI/ML in improving cybersecurity**
- Dealt with the integration of **AI in Network, Cloud and IoT (Internet of Things) security**; Provided a **step-by-step layout** to ensure the responsible integration of AI
- Published white paper in **OneYoungIndia**.