

PRADHYUMNA PRAKASH

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SUMMARY

Award-winning machine learning researcher and computer science engineer. Conducted ML-based ocular disease classification research, Sanskrit-based RAG research. Deploying AI enhanced apps and agents. CBSE National chess player and Regional winner. Carnatic music singer with over a decade of experience.

EDUCATION

Public High School

Graduating June 2026

Delhi Public School, Bengaluru East, Karnataka, India

SAT Score: 1550 (760 - English, 790 - Math)

Relevant coursework: AP Computer Science A - 5/5, AP Calculus BC - 5/5, SAFL (Sanskrit As A Foreign Language)

TECHNICAL SKILLS

Research: Machine Learning, Data Analysis, Ophthalmology, LLMs, RAG Systems and Computer Vision Models

Personal Skills: Mentorship, Leadership, Resilience, Decision-Making, Multi-Tasking

Programming: Python, Java, Javascript, HTML, CSS

Certifications: IBM Data Science Professional Certificate, Stanford Online DeepLearning.AI Machine Learning Specialization, PCEP Certified Entry-Level Python Programmer

Awards/Honors: Amazon Best Seller Author (Free Kindle Section) for categories: Computer Science, Mathematics, Computer Mathematics; 1M1B International Tech Olympiad Bronze Medalist (2025)

PROFESSIONAL EXPERIENCE

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

- Developed a real-time, browser-based multiplayer application with a primary goal of enabling synchronous game-play between users across devices, using the **NGX-Chess-Board (MIT licensed)**.
- Helped develop the user interface using **Angular**, and integrated the chess logic
- Built session management and backend logic using **Node.js**
- Implemented **Websocket-based communication** for real-time game synchronization

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

- Developed an AI-Powered Expense Categorization Engine that combines **machine learning, natural language processing and user-facing customization tools** to automatically classify expenses while allowing users to tailor categories to their personal needs
- Delivered progress updates in **two team meetings every week**. Directly worked with cofounder
- Pre-processed 9,000+ transactions. Handled **NLP, ML, UI** components

ACADEMIC RESEARCH AND PROJECTS

Ophthalmology Machine Learning Research

Built and tested unsupervised and supervised Convolutional Neural Network models to classify ocular diseases.

- Used 3 **Convolutional Neural Network** models to classify 4 and 8 disease classes present within a fundus image respectively. Achieved a maximum accuracy of 90.77% (~66% better than random) and 55.73% (~44% better than random) for 4 and 8 classes respectively.
- Developed a **K-Means Clustering algorithm** that categorized 4 ocular diseases present within a fundus images. Demonstrated that K-Means Clustering can't be used in large, unbalanced datasets
- Research paper accepted for publishing in the **National High School Journal of Science Flagship (acceptance ~1%)**

Sanskrit based RAG Systems Research

Researched RAG systems with the Sanskrit scriptures Bhagavad Gita and Itihasa

- Researched the effects of **Sanskrit based RAG systems** in improving faithfulness, relevance and helpfulness to reflective questions
- Evaluated the effects of stronger LLMs in improving RAG systems
- Research paper published in **International Journal of Advance Research, Ideas and Innovations in Technology (Impact Factor: 6.078)**: [Link to Research Paper](#)

Swasti AI

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

- Developed an Artificial Intelligence Agent capable of understanding the user's emotions and providing helpful words of wisdom: [Link to Swasti AI](#)
- Deployed worldwide, Engaged **200+ users from Indian and US communities**;

CollegenceAI

Founder of CollegenceAI - AI powered agent that aids students in the US college application process.

- Provides **personalized** advice on each individual user's extracurriculars and awards
- Contains 140+ programs and internships, 100+ colleges and 80+ scholarships catered to the student's interest and needs
- Connected to user's **Google calendar and airtables** to store deadlines and new activities
- Presented Capstone Product at **Elevate21 (OneYoungIndia hosted)**: [Link to CollegenceAI](#)

ACTIVITIES

Chess Player, Chess Club Founder

Playing Chess for a decade. Started my school's first chess club

- Peak rating of **2168 in Rapid and 2211 in Bullet** on chess.com, **1646** in FIDE. **2x CBSE regional winner, best player on board 3 in 2024. 2x CBSE National Qualifier.**
- Founder of School Chess Club. Engaged 10+ members in weekly club meetings; Organized 20+ matches and prepped students for tournaments

Published Book Author

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

- Wrote **85+ page book on Large Language Models and RAG systems**
- Facilitated readers' understanding by providing hands-on guidance with real projects
- Published in Amazon KDP. Achieved **Amazon Best Seller** for the categories: Computer Science, Mathematics and Computer Mathematics for Kindle Free: [Link to Book](#)

Elevate21

Elevate21 Member - Published Research

- Member of Elevate21, a 20 week long 21st-century skill building program hosted by **One Young India**
- Engaged in 20+ weeks of **Geopolitics, Economics, Business and AI Studies and Debates**
- Published white paper on the pros and cons of AI in Cybersecurity in **OneYoungIndia**: [Link to Paper](#)

Music

Carnatic Music Singer

- Carnatic music singer for 12+ years
- Participated in 20+ cultural and musical events
- Trained by renowned **Divya Giridhar** for 4+ years
- Featured on local newspaper

SAFL - Sanskrit as a Foreign Language

Completed 3 year Sanskrit Philosophy and Indian culture college credit course

- Engaged in **3 years** of discussions, debates and pro-active learning about Sanskrit philosophy, scriptures and texts along with Indian culture

Volunteer - Samarthanam Trust for Blind and Disabled

Converted Story, Motivational and Educational books into audiobooks for the Blind