# Vihaan Gupta

Cambridge, MA | vihaangupta@college.harvard.edu | +1(857)-829-8855 | vihaangupta.dev

## Education

**Harvard University**                                                                                                      **May 2027**
- B.A. in Computer Science and Mathematics with a secondary in Philosophy; Cumulative GPA: 3.9/4.0.
- Relevant Coursework: Systems Programming, Machine Organisation, Data Structures and Algorithmic Theory, Differential Privacy, Computer Graphics, Machine Learning, Group Theory, Complex Analysis, Probability.

## Experience & Projects

**Software Development Intern, Miami International Holdings**                                   **Jun 2025- Aug 2025**
- Interning as a Software Engineer on the Business and Systems Development team.

**Software Development Intern, As1 Social**                                                         **Mar 2025- May 2025**
- Contributed to the MVP development of social media app in React Native (frontend) and PostgreSQL (backend).
- Developed caption parsing and hashtag ranking for video recommendations, boosting user retention by 30% through personalised feeds based on user preferences, keyword relevance, and trend recency.
- Optimised caching and memory usage by over 50% via implementing video prefetching and feed pagination.

**Software Development Intern, Avalon Infosys**                                                    **May 2024- July 2024**
- Developed 3wmaps, a mobile app to help users locate K-12 schools in developing countries.
- Designed the profile page using React to visualise school data, increasing data accessibility by 30%.
- Integrated a Firebase backend to fetch school-specific data like gender ratio, toilet-to-student ratio, etc, in JSON.

**Game Developer, FantasyWorld**                                                                                  **May 2024**
- Built a Minecraft-style voxel engine in Unity with C#, implementing chunk-based world generation, real-time terrain modification, and optimised mesh rendering for performance and scalability.
- Designed a serialisation system for saving and loading world state, using binary I/O to persist custom terrain data.

**Sole Developer, Founder, Prodspace**                                                               **May 2023- Aug 2023**
- Developed a productivity-enhancing web application using React with features like a habit tracker, calendar, etc.
- Added elements of Gamification, like streaks and friends list, to maintain a 30-day user retention of 25%.
- Active Users from over 63 countries within two years of its lifetime. Currently under temporary redevelopment.

**Tech Intern, SMVDU Narayana Hospital**                                                            **July 2022-Aug 2022**
- Developed an algorithm to keep track of vacant beds for admission/discharge of patients during the pandemic.
- Maintained a PostgreSQL database of the oxygen availability in the COVID-19 wards and Operation Theatres.

**Software Development Intern, TA Digital**                                                            **Dec 2021-Jan 2022**
- Interned as a full-stack web developer and facilitated in making the website more user-friendly/easier to navigate.
- Conducted user testing and feedback sessions along with accessibility checks to promote equitable web design

## Skills

- **Programming Languages:** Typescript, Javascript, C/C++, Rust, Swift, Python, C#, Dart, Java, SQL.
- **Frameworks & Libraries:** ReactJS, NodeJS, Angular, Tailwind CSS, Bootstrap, Flask, React Native, Flutter.
- **Tools & Platforms**: Git, Bitbucket, Docker, Postman, Azure DevOps, Visual Studio Code, Figma, Power BI.

## Campus Involvement

**Executive Director (President), HCS Tech For Social Good:**
- Managed 4 teams with over 30 members to design UI prototypes for 4 clients in the non-profit sector.
- Overlooked more than 6 rounds of usability testing and 20 user interviews to help understand pain points.
- Coordinated project expectations and helped maintain effective communication for optimum client satisfaction.

**Teaching Assistant, Computer Graphics (CS1750):**
- Hosted weekly office hours to assist students with concepts of shaders, linear algebra, keyframes, geometry, etc.
- Graded and provided feedback on weekly programming assignments in C++ using the OpenGL library.