

Siddharth Chaudhary

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EDUCATION

St Paul's School

London, UK

General Certificate of Education

2021 – 2026

- **A-Levels:** Mathematics, Further Mathematics, Physics, Computer Science, all predicted A*
- **Extended Project Qualification:** Designing and developing an iOS app to track workouts , achieved A*
- **GCSEs:** 11 in total including Mathematics and English Language, all grade 9 (equivalent to A*).
- **Olympiads:** UK Olympiad in Artificial Intelligence 2025; achieved Gold (92/100) and qualified for national team selection interviews.

EXPERIENCE

Independent Researcher

Sept. 2025 – Present

St Paul's School

London, UK

- Focus: Foundational sequence learning and adaptive architectures, including transformers, state-space models, and recurrent networks.
- Conducting independent research on modularity, memory formation, and plasticity mechanisms for efficient long-context reasoning and rapid adaptation.
- Authored two papers:
Hydra: A Modular Architecture for Efficient Long-Context Reasoning – NeurIPS 2025 Workshop on Efficient Reasoning.
Enabling Robust In-Context Memory and Rapid Task Adaptation in Transformers with Hebbian and Gradient-Based Plasticity – Under review at TMLR, 2025.
- Implemented large-scale experiments using self-managed GPU infrastructure.
- Released reproducible open-source implementations accompanying both papers.

Co-founder

Aug. 2023 – Present

Eleven Plus Vocab

London, UK

- Co-founded and currently operating an edtech venture providing digital products for UK 11+ entrance exam preparation.
- Built and maintained an e-commerce platform using Next.js integrated with the Shopify API, generating thousands in annual revenue.
- Developed companion iOS and Android apps for practice and assessment, reaching several thousand downloads.

Software Engineering Intern

July 2025 – Aug. 2025

Cactus Compute (YC S25)

San Francisco, CA

- Implemented end-to-end tool-calling capabilities in the core Cactus framework, from API design to integration and testing.
- Contributed to the open-source library and React Native demo app showcasing new inference and framework features.
- Led testing and provided structured feedback on framework releases to improve reliability and developer experience.

Software Engineering Intern

Mar. 2025 – June 2025

CorpusAnalytiX (Wharton Cypher Accelerator)

Philadelphia, PA

- Contributed to a healthcare data ecosystem designed to democratize research access and accelerate data-driven R&D.
- Developed intuitive user interfaces in TypeScript and Next.js for dataset exploration and request management.
- Fine-tuned language models to generate synthetic dataset “heads,” allowing secure, privacy-preserving previews of sensitive medical data.

Full-Stack Developer

Aug. 2024 – Mar. 2025

Lgcy

San Francisco, CA

- Designed and implemented the app's user interface and visual system with a focus on accessibility and cohesive experience.
- Developed and integrated GPT-based conversational agents using fine-tuned models and the OpenAI API.
- Collaborated on product architecture and conducted performance optimization and code reviews to improve reliability.

PROJECTS

MusclePeak | *Swift, SwiftUI, CoreData, Xcode, iOS*

Sept. 2024 – May 2025

- Developed and released a fitness app for iOS that allows users to log workouts, build multi-week training plans, and track progress efficiently.
- Designed a minimalist, intuitive UI with offline data storage, automatic rest timers, and advanced set-tracking features.
- Published to the App Store. <https://apps.apple.com/gb/app/musclepeak/id6741804742>.

TECHNICAL SKILLS

Languages: Python, JavaScript/TypeScript, Swift, C/C++, SQL

ML: PyTorch, JAX, Matplotlib, NumPy, pandas, scikit-learn

Frameworks: React, Next.js, Node.js, React Native, SwiftUI, UIKit

Tools: Git, Docker, Vercel, Xcode, Figma, MongoDB