RAVJOTH SINGH BRAR

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SUMMARY – A highly motivated student AI researcher deeply interested in AI's capability to transform society for the betterment of all humanity.

EDUCATION

Haberdashers' Boys' School – Aske Schol   **September 2020-Now**

- Taking A-Level Maths, Further Maths, Physics and Philosophy as an Aske Scholar, selected to lead part an academic excellence program: *The Alexandrians*
- Achieved all Grade 9's (A**) in GCSE Maths, English Literature, English Language, Chemistry, Physics, Biology, Geography, Spanish, Computer Science, and Design Technology (100% in coursework)

WORK EXPERIENCE

Prismatic Studios – Research Based Writer   **November 2025-Now**

- Researching, developing, and writing content, shaping raw founder ideas into sharp and impactful brands
- Collaborating with strategists and designers to craft cohesive narratives

blankstate – AI Summer Intern (Internship)   **July 2025**

- Simplified 30-page AI research paper into a technical whitepaper analysing how AI interprets organisational patterns for performance insights for investors
- Contributed to the ENTERPRISE 100 (a London-based angel investor club) application on blankstate's unique initiatives and strategy
- Developed and executed sales strategies, cold emails, and company pitches

EY – AI Wealth & Asset Management Team   **August 2024**

- Researched, documented, and presented on internal use cases of AI
- Conducted competitive client analysis

PROJECTS

Designing a custom RAG model for my school   **Ongoing**

- Designing and implementing a lightweight RAG model utilising the school's bespoke data to create a custom educative AI model

Authored a research paper linking AI and Sikhism (Personal)   **October 2025**

- Designed and executed an experimental approach to use Sikhism as a moral framework to guide AI regulation – "Designing AI from a Sikh's perspective
- Sent off to The AI Ethics journal and is currently being peer-reviewed

Fine-tuned an AI Model for Biology students (Oxford AIEOU Event)   **April 2025**

- Fine-tuned SmolLM2-135M model using HF Transformers and PyTorch

- Synthetically generated custom biology dataset adhering to A-Level and GCSE specification with labels - Published dataset on HuggingFace
- Implemented training checkpoints and mixed-precision training

Investigated Möbius strip topology in neural networks (Personal)   January 2025
- Designed and implemented a novel neural network architecture incorporating Möbius strip topology to enhance feature learning and clustering
- Achieved +24%, +53% in Silhouette and Calinski-Harabasz scores whilst maintaining overall accuracy of 94%
- Developed hybrid framework merging Euclidiean and non-Euclidean geometry through custom PyTorch layers
- Applied transfer learning to demonstrate superior internal topology

LEADERSHIP AND ACTIVITIES

**Student Council: Vice Chair, Head of Digital & Communication,   October 2025-
Director of Buddies, Sixth Form House Mentor   Now**
- Managing the council affecting 700+ students, ensuring that our mission is relevant, achievable, and measurable, and well-known to all students
- Managed the integration of 150+ new joiners into the school across year groups

Head of Model United Nations (MUN) Club; International Chair   June 2025-Now
- Co-ordinating one of the school's largest clubs with over 150 students per week
- Selected as a Chair in an international MUN conference committee about AI

Action Breaks Silence – Board Advisory   March 2024-Now
- Charity committed to eradicating all violence against women and girls
- Led the Communications, Safeguarding, and EDI modules for a course upskilling Sixth Formers to give talks about gender, being trialled in multiple continents

AWARDS AND ACHIEVEMENTS

Royal Air Force (RAF) – Arkwright Engineering Scholarship   April 2025-Now
- Awarded a prestigious RAF-funded scholarship after three rounds of selection
- Providing mentorship, funding, and support to future engineering leaders

Leaf – Fellowship Program   June-August 2025
- Selected as 0.5% of applicants to be awarded fellowship
- Conducted topological data analysis on AI-generated content

Compu-J – Imperial AI Innovation Prize   April 2025
- Won the opportunity to work with Compu-J's ML R&D Teams
- Fine-tuned another SLM on exemplary essay content and, through advanced prompt engineering, produced a winning AI-written essay

REFEREES – Available on request: ravjothbrar@gmail.com