

# Lissan Koirala

[linkedin.com/in/lissankoirala](https://www.linkedin.com/in/lissankoirala) • [github.com/LissanKoirala](https://github.com/LissanKoirala)

## Education

---

- Physics with Astrophysics and Cosmology MSci**, King's College London Sept 2023 – May 2027
- **Grade:** First Class Honours, Predicted (81% average 2nd Year)
- International Baccalaureate (IB)**, Bexley Grammar School Sept 2021 – May 2023
- **Grade:** 40 points | HL: Mathematics, Physics, Computer Science

## Experience

---

- Summer Intern**, IBM – London, UK June 2025 – Sep 2025
- Combined technical skills with business impact, working across Automation and Data & AI on client solutions and demos.
- Led and closed a proof-of-concept with a ferry client, integrating Maximo and watsonx Orchestrate with Agentic AI use cases, demoing it to senior management. Scaled it into a reusable asset for the Data & AI team; presented at IBM Partner Accelerate.
  - Built an interactive demo with Boston Dynamics' Spot robot, training a custom YOLO model and digitising temperature readings to trigger alerts in Maximo; now live in IBM's Innovation Studio to demonstrate real-time enterprise asset monitoring to clients.
  - Co-developed multi-step AI workflows using MCP and RAG for IBM Research's BeeAI workshop (100+ attendees, NYC).
  - Initiated collaboration between two internal IBM teams after identifying overlapping developments while implementing a new project initiative of my own, accelerating progress on a new internal sales tool being pushed for wider use by senior leadership.

- King's Undergraduate Research Fellowship (KURF)**, King's College London – UK Nov 2024 – Present
- Research Assistant (Part-time)**

- Offered a position to continue the summer research project; currently developing extensions and writing a report on findings.
- Developing infrastructure to enable NGOs to effectively implement and integrate the research into their daily operations.
- Invited to present at Posters in Parliament, House of Commons, a national undergraduate research exhibition by the BCUR.

- Research Fellow (Summer)** Jul 2024 – Oct 2024
- Developed computer vision algorithms to assist NGOs in automated scene detection and behavioural analysis on many videos.
  - Researched and implemented multiple models, conducting detailed analysis on model performance across different datasets.
  - Designed an algorithm to score and encompass multiple label detections to identify scenes of interest using IoU overlaps.
  - Fine-tuned an object detection model with custom dataset, optimised for deployment on edge devices, gaining experience in machine learning, and environment management on King's high-end GPU servers.

- AI Summer School**, Y Combinator – San Francisco, USA June 2025
- Sponsored and selected among the top CS undergrads, masters, and PhD students to attend AI Startup School, to hear from the world's top AI experts and founders including Elon Musk, Satya Nadella, Sam Altman, Andrej Karpathy, Andrew Ng and more.
  - Built an international network of students and founders, exchanging diverse perspectives on building and scaling ventures.

## Projects

---

- Algorithmic Trading Project** [live at: [algo.lissan.dev](https://algo.lissan.dev)] June 2020 – Present
- Researched and deployed a full-stack infrastructure to execute a fully algorithmic trend-following trading strategy from scratch.
  - Incorporated real-time data streaming, economic event awareness, and multi-asset position management into the system.
  - Designed a custom exponential position-sizing model, adjusting risk to current market regimes and volatility, with insights from statistical analysis of past trades, books, and experience - increasing reward ratios while keeping market exposure risk constant.
  - Evaluated optimisation results from backtesting scripts, simulating live trading behaviour to tune parameters and pick assets.
  - Built analytics dashboards visualising open exposure, P&L, trade logs with video timelapse of executions for post-trade analysis.

- Hackathons** [devpost.com/LissanKoirala](https://devpost.com/LissanKoirala)
- Competed in numerous hackathons worldwide, adapting quickly and learning new technologies under tight deadlines.
  - Took on leadership roles, coordinating tasks and communicating complex ideas effectively to deliver award-winning projects.
  - Collaborated with a diverse set of peers, strengthening teamwork and interpersonal skills in high-pressure environments.

## Technologies

---

**Skills:** Full Stack Development, Python, Java, Proficiency in Linux systems & Cloud Computing/Hosting, Apache, Web Scraping, Flask, Django, API, Websocket, HTML, SQL, Git, Docker, Pandas, Backtesting.py, Bloomberg Markets Concepts (*Certification*)