

King Jin

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EDUCATION

The University of Edinburgh

Bachelor of Science in Artificial Intelligence

Edinburgh, UK

Sep 2024 – May 2028

- Year 1–2 average: **85/100**
- Relevant Coursework: Linear Algebra, Reasoning and Agents, Algorithms and Data Structures, Data Science, Several Variable Calculus

EXPERIENCE

Senior Perception Engineer

Edinburgh University Formula Student (EUPS)

Edinburgh, UK

Sep 2025 – Present

- Driving the team's camera–LiDAR **sensor-fusion** workstream: building a prototype into a reliable, fully GPU **PointPainting** pipeline on the car (**PTP** time sync, calibration, **TensorRT** segmentation) and evaluating its impact on **PointPillars** cone detection; mentoring a junior engineer.
- Collected a **3,000+** **image** cone dataset across multiple campus sites and annotated it by cone colour class in **CVAT**, creating the team's reusable data pipeline.
- Fine-tuned and benchmarked 5 segmentation models (**YOLOv11/v12**, **YOLO26**, **YOLOv11-P2**, **RF-DETR**) on mIoU, per-class IoU, Dice and latency, selecting RF-DETR for deployment.

PROJECTS

JustOneGPT – LLaMA-Style LLM from Scratch

Sep 2026 – Present

- Re-implemented Karpathy's nanoGPT and trained a custom byte-level **BPE tokenizer** on a Chinese long-form history corpus.
- Upgraded the nanoGPT baseline to a LLaMA-style architecture (**RoPE**, **RMSNorm**, **SwiGLU**, **grouped-query attention**) and ran controlled ablations under a fixed compute budget to measure each component's effect on validation loss.
- Built **KV-cache** inference with top-k/top-p sampling, and sped up training with bf16 mixed precision, FlashAttention (SDPA) and `torch.compile`.

Nordic AI Cup – Real-Time Drone Surveillance

Sep 2026

- Built, in a team of 2, a real-time system detecting and tracking small objects in 600 m-altitude drone imagery at 3 frames/s; placed in the **top 30%** of teams in Denmark.
- Expanded a **25-image** training set with diffusion-generated synthetic data, and designed a coarse-to-fine active zoom policy using level-specific YOLO models, super-resolution and global-coordinate tracking.

LEADERSHIP & COMMUNITY

Committee Member

EdinburghAI

Edinburgh, UK

Aug 2026 – Present

- Co-designed the format of the **PhD Gameshow** to lower the barrier for undergraduates entering research: 8 PhD students pitch their work, with live before/after audience voting, a research fair and industry stalls.
- Secured the venue and liaised with the university's AI innovation hub to source PhD speakers and startup guests.
- Reaching out to industry sponsors to fund the society's year-round programme, including hackathons and the AI Expo.

Volunteer

ROSCon UK 2026

Edinburgh, UK

Oct 2026

- Representing EUPS as a volunteer, guiding visiting robotics researchers on tours of School of Informatics labs in the Informatics Forum and Appleton Tower.

SKILLS

Programming: Python, C++, Java

ML: PyTorch, Hugging Face, Ultralytics YOLO, OpenCV, ONNX Runtime, TensorRT, NumPy, Pandas

Tools: ROS2, CVAT, Docker, Linux, Git

Languages: Chinese (Native), English (Fluent)