Diesel Mears

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2026-present	**PhD student** The Cyprus Institute Supervised by Professor Constantine Dovrolis
2026-present	**Graduate Research Fellow** Agentic AI on Pharos-CY and GenAI4ED The Cyprus Institute
2025	**MSc Data Science, Technology and Innovation, with Merit** University of Edinburgh, College of Science and Engineering

Research interests

I study how AI systems use knowledge of their own uncertainty and limitations to decide what to do next. My doctoral research concerns the transition from self-relevant information to action-guiding situational self-modelling.

- Internal reasoning and the relationship between model computations and explanations.
- Self-modelling: using experience to assess knowledge, reliability and capabilities.
- Decision-making under uncertainty: when to answer, check or ask for help.
- Agentic AI: updating plans when observations change what a system knows about its situation.

Selected software

The Control Room (2026). The interactive centrepiece of dieselmears.com: a fleet of robot agents mapping a dark city, each acting on how well it believes it knows the streets and correcting when it is wrong. A rule-based simulation built with TypeScript and Canvas 2D, with no runtime dependencies.

Project context

Pharos-CY: AI infrastructure connecting research and industry. Horizon Europe / EuroHPC, grant 101263007.

GenAI4ED: Generative AI and human skills in secondary education. Horizon Europe, grant 101178648.