

Lead AI-ML Engineer

Waterloo, Ontario | Full-time

Who we are

Sidian is disrupting architecture, engineering and construction (AEC). We began September 2025 with mid-sized engineering firms, raised a US\$1M pre-seed round at the end of May and are now moving into enterprise, with 3 of the top 30 global firms entering the platform in 3 months. Our mission is to lead AEC's technological revolution, bringing the same step-change already reshaping medicine, finance and law. Our purpose is simple: to make humanity's basic needs affordable and sustainable, starting with infrastructure.

Our Team

A small but mighty team of 4. James is the CEO with 4 years of experience in AEC, a varsity football player at Waterloo, and Sanford Fleming recipient for top academic students. Mankirat is the CTO, an ex-founder, and Valedictorian of engineering at Waterloo. Cardoso is a founding engineer with a Masters in AI/ML and expertise in knowledge graphs and GNNs. Finally, Dimo is a CV Masters student leading the drawing understanding.

The role

Engineers today work with data trapped in silos...3D models, BIM files, PDF drawings, spreadsheets, Word documents, emails, timesheets, etc. that not even other engineers, let alone AI, can easily read across. At Sidian, we're building the company's brain that brings all the engineering firm's knowledge to their fingertips.

As our AI/ML Engineer, you'll build the models that make that brain think. You'll train vision models that read structural drawings, graph neural networks that reason over building systems and their dependencies, and fine-tuned language models that understand engineering intent to help us revolutionize the artificial minds that will change the industry as we know it.

You'll work directly with the founders, own core architecture, ship product, learn from customers, and shape the engineering culture. As a critical early team member, you'll experience rapid growth with evolving opportunity as the company scales.

What you'll own

Build graph learning systems: GNNs over the company knowledge graph for link prediction, classification, and reasoning across connected engineering data.

Fine-tune foundation models: LoRA/QLoRA, PEFT, instruction tuning, and evaluation harnesses that tell you whether a model actually got better.

Design the algorithms underneath: shortest path, traversal, clustering, and optimization routines that power search, routing, and recommendation over graph-structured engineering data.

Own the ML lifecycle: data curation, training infrastructure, experiment tracking, inference optimization, and monitoring in production.

Work with customers to turn ambiguous engineering workflows into simple, dependable products.

What you bring

- Strong Python and deep learning fundamentals, with hands-on PyTorch experience training models end to end.
- Experience with CNNs and computer vision, plus GNNs and geometric deep learning (PyTorch Geometric, DGL, or equivalent).
- Practical experience fine-tuning LLMs....LoRA and evaluating them rigorously.
- High agency, product judgment, and clear communication. AEC experience is not required.
- Master's education good to have.

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