

Milo Knowles

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WORK EXPERIENCE

[Roebling](#) – *AI-powered development and planning stack for industrial infrastructure* Jun 2025 – Present
Co-Founder & Lead Software Engineer Remote

- Led early product development, platform architecture, and software team management
- Designed and built an industrial process simulator, symbolic equation solver, no-code modeling environment, CAPEX/OPEX engine, and collaborative version control system.
- Gained domain experience in chemical process simulation, financial modeling, and FEL for capital projects.
- Stack: React, TypeScript, Tailwind, Python, FastAPI, PostgreSQL, Supabase, Vercel, Langchain, PyTorch, GCP

[Fifty Years](#) – *Deep tech startup founder program* May 2025 - August 2025

- Validated 3 ideas across food & agriculture, including a plant engineering & trait discovery platform, automated greenhouse farming, and photosynthetic biomanufacturing using duckweed (Lemna).

[Synonym](#) – *Biomanufacturing infrastructure and scale-up support* Apr 2024 – May 2025
Senior Software Engineer Remote

- Architected and built Scaler, a process simulation and techno-economic assessment tool for biomanufacturing
- Led product development from idea to first revenue. Delivered 4 projects to a F500 customer, made key engineering hires, and ran investor demos. Helped enable a Series A raise and spinout of [Roebling](#) (see above).
- Stack: React, TypeScript, Next.js, Python, FastAPI, PostgreSQL, Supabase, Vercel

[Food for the Future](#) – *Carbon crediting for sustainable food* Jan 2022 – Dec 2023
Co-Founder & CTO Remote

- Built a platform for tracking food emissions based on purchasing data and calculating user carbon footprints
- Collaborated with Verra to develop a sustainable food methodology and funded 3 pilots at K-12 schools

[Singularity Energy](#) – *Data platform for tracking grid emissions* Feb 2022 – May 2023
Software Engineer Somerville, MA

- Led development of Singularity's grid forecasting product, data API, and customer-facing utility dashboards
- Stack: React, TypeScript, Python, FastAPI, PostgreSQL, Terraform, AWS

[Skydio](#), [Optimus Ride](#), [Adaviv](#), [Kespry](#) – *Various robotics and computer vision companies* 2018 – 2019
Software Intern – Autonomy / Perception Redwood City, CA / Boston, MA

- Skydio: Developed the first prototype of the “3D Scan” product (C++/Python)
- Optimus Ride: Developed computer vision tools to autogenerate lane and curb maps from LiDAR scans (C++)

EDUCATION

Massachusetts Institute of Technology 2019 – 2020
MEng, Artificial Intelligence ([Paper](#)) – [Robust Robotics Group](#) Cambridge, MA

Massachusetts Institute of Technology 2015 – 2019
Bachelor of Science, Computer Science Cambridge, MA

CERTIFICATIONS, SKILLS & INTERESTS

- **Languages:** Python, Typescript/JavaScript, C++, C#, R, MATLAB
- **Web:** React/Next.js, Redux, Tailwind, FastAPI, PostgreSQL, Terraform, Supabase, Vercel, AWS, GCP
- **AI/Robotics:** C++, PyTorch, OpenCV, ROS/LCM, GTSAM, Unity3D, PydanticAI
- **Strengths:** Zero-to-one product ideation, multidisciplinary engineering, techno-economic modeling, navigating early-stage startup uncertainty. Broad experience across robotics, energy, agriculture, climate-tech, and biology.
- **Interests:** Triathlon, Type 2 fun, [writing](#)