

MARVIN GAO

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Since 2019, building the mechanism that turns engineers into AI engineers — so frontier AI is something people build, not only consume, and cost stops deciding who takes part.

A practicing researcher and engineer alongside it — a one-to-one agentic tutor shipped to paying learners; frontier research (JMLR, TPAMI, ICRA, AAAI) and production AI at IBM, Ant and Alibaba.

Still teaching directly, still reading the learners' transcripts — retention data, not intuition, sets the pedagogy. Fifteen years, four technology waves, 2,000+ engineers across 13 countries and 4 continents.

FOUNDING & OPERATING

Founder & CEO — Parallight, San Mateo, CA · parallight.com

2026 – present

Agent systems that train engineers into Agent Engineers. Sole architect of product, pedagogy and infrastructure.

- **Mentor Agent** — watches how a learner actually works and adapts what it teaches: interactive experiments, in-browser code labs, line-by-line derivation of the mathematics, and guided reading of architecture diagrams. A hard gate blocks code execution until the learner commits to a written prediction.
- **Lab Mentor** — takes a learner through a real project, interrogates their choices while they are still making them, evaluates the finished work automatically, and returns specific improvements.
- **News Agent** — continuously searches the open web for what actually moved in AI that week, so learners stay current without drowning.
- **Course Studio & Lab Studio Agents** — generate the courses, slides and lab exercises themselves, then stress-test every one before release against simulated learners built from real learner profiles: adversarial QA on the curriculum, not just on the code.
- Ran in production with **50 paying learners, \$40K in revenue and \$35K in net profit** in the first three months, on a self-built multi-provider LLM gateway with per-call metering, fail-closed budgets and self-healing failover.
- **Hands-on lab** — ~57,000 tutor turns across 997 cloud-sandbox sessions and 122 submitted project builds, with weekly-active learners **flat at ~50% of entitled users for 8 consecutive weeks**: a plateau, not a decay curve.
- **Academy** — 527 one-to-one mentor sessions, 401 in-lecture responses graded at 85% correct, 165 AI-guided readings and 86 teaching-assistant escalations — each mined for where the *teaching* failed, not the learner.
- Evaluation and data loop: dual-axis outcome + trajectory judging, confidence calibration, un-fakeable functional probes, and consented capture of 4,018 de-identified learner messages classified into a 17-cluster need taxonomy.

Founder & CEO — KeploreAI Inc., Santa Clara, CA · keploraai.com

2025 – 2026

Autonomous research and software-engineering agents for enterprise R&D.

- Built the first working system myself, then defined the product, recruited and led the team, carrying the full founder scope: engineering, product, fundraising, go-to-market. Raised a pre-seed at a **\$27M valuation** and led delivery of **two enterprise B2B engagements**, automating customers' internal R&D workflows end to end.
- **Wound the company down deliberately in 2026** when general-purpose coding agents closed the capability gap our differentiation rested on; the runtime, evaluation and gateway work carried forward into Parallight.

Partner, GM & VP — Huike Group (Kaikeba), China

2019 – 2021

Joined through the acquisition of iLearning.zone. A Chinese ed-tech unicorn (>\$1B).

- Ran the company's AI business unit, sustaining **\$1–2M in monthly revenue across 2019–2021** by industrializing AI-engineer training around frontier, case-driven practice — shifting online AI education in China from watching videos and reading slides to building real projects under real constraints.
- Built what was then the largest online AI-education program for working adults in China. Its paying alumni are now spread across **nearly every major technology company in the world**.

Founder & CEO — iLearning.zone · ilearning.zone

2018 – 2023

Founded after seeing, at IBM and Alibaba, that AI candidates could usually either derive the formulas or nothing else — and that every project on their résumé was a toy problem.

- Designed and built the enterprise-grade projects myself: **simulated business requirements, simulated production data, and interactive code with staged solution hints** — so an engineer could practice on a problem that behaved like the real thing.

- Reached **\$300K net profit in its first year** and was acquired by Huike Group, which went on to build its Kaikeba brand.

RESEARCH & PRODUCTION AI

Research Lead — Johns Hopkins University

2024 – 2025

Project lead and first author on GUIDES, accepted to IEEE ICRA 2026.

- Led the project end to end — **problem selection, assembling and directing a seven-author team across two universities** (Johns Hopkins and UC Riverside), theoretical framing, and experimental design.
- Built a framework that gives pre-trained robot policies semantic awareness **without architectural redesign**: a fine-tuned vision-language model generates contextual instructions, encoded into guidance embeddings fused into the policy's latent space by targeted fine-tuning.
- Results: **+10 points absolute task success** for transformer policies (33.8% relative) and ~106% average relative gain for diffusion policies in RoboCasa; on a real UR5 arm, grasp strike-zone engagement rose **from 4.1% to 38.8%**.

Reinforcement-Learning Researcher — Peking University

2021 – 2023

MARLlib — a unified, reproducible framework and environment interface for multi-agent RL, now widely used in the field.

- Owned the **system design and architecture**, and the **distributed implementation and experiments** for the core algorithms — HAPPO and HATRPO among them. Published in the *Journal of Machine Learning Research*.

Senior AI Scientist (Band 8) — IBM, China Intelligent Service

2018 – 2019

- Built China Construction Bank's automated Q&A system, live in Shanghai, Guangzhou and Shenzhen; nationwide route optimization for bank cash-carrier fleets; model-based solar-PV generation forecasting for TBEA.
- Led the PCB production-document automation project for **Fast Print**, the world's largest small-batch PCB manufacturer: a system that automatically parses and validates unstructured, non-standardized customer requirement documents — **cutting 70% of the working time** out of that step.

NLP & Machine-Learning Engineer — Alibaba & Ant Group

2017 – 2018

- Risk-classification models over Alipay transfers, earning a national invention patent for potential-risk-word discovery; automatic news abstraction powering Tmall Genie and Rokid smart speakers, and viewpoint extraction from news text.

SELECTED PUBLICATIONS

GUIDES: Guidance Using Instructor-Distilled Embeddings for Pre-trained Robot Policy Enhancement — IEEE ICRA, 2026

Red-teaming Language Models as a Multi-round, Multi-agent Game — IEEE TPAMI, 2026

Prompt to Transfer: Sim-to-Real Transfer for Traffic-Signal Control — AAAI, 2024

MARLlib: A Scalable and Efficient Multi-agent Reinforcement Learning Library — Journal of Machine Learning Research, 2023

EDUCATION

M.S. Computer Science — Johns Hopkins University • Interactive Computing & Robotics Lab

M.S. Computer Science & Software Engineering — Zhejiang University • Knowledge Graph Laboratory

B.S. Computer Science — Lanzhou University

TEACHING SINCE 2011

- **2011** — Took a volunteer team into Gansu's poorest counties to teach farmers and schoolchildren to use a computer and the internet for their own work — **Outstanding Volunteer of Gansu Province**.
- **2018 – 2021** — Natural Language Processing, and Artificial Intelligence: Principles & Practice, to engineers worldwide.
- **2020** — *Build Neural Networks Framework from Scratch*: **over 5,000 learners** cumulatively; also taught on site at several Chinese universities and major technology companies.
- **2023** — Reinforcement Learning.
- **2026** — Agentic Engineering: a 12-week production curriculum deliberately weighted 20% lecture, 80% one-to-one work with an Agent Tutor — the split our own retention data argues for, and what Parallight runs on today.