Richard Liu

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Education

University of California, Berkeley *2025 – 2028*
B.A. Computer Science; B.A. Cognitive Science

No. 2 High School of East China Normal University *2022 - 2025*
High School Diploma
- **GPA**: 4.10/4.18, ranked 3/520
- **Coursework**: 3-year National College Entrance Exam (Gaokao) curriculum. Enrolled in 11 APs.

Industrial Experience

Co-Founder *San Francisco Bay Area*
PivotHire AI (Stealth-mode HR Tech Startup) *May. 2025 -*
- Built **full-stack platform using Next.js, PostgreSQL, and Figma**
- **Custom prompt engineering and category weight distribution** reduces 85% of hiring time
- **Trial contracts with 3 headhunting firms** managing 10K+ candidate database

Software Development Engineer Intern *San Francisco Bay Area*
MyHomie (6-Figure Seed-Round PropTech Startup) *Jan. 2025 - Apr. 2025*
- Co-developed **conversational AI voice agent** processing **2k+ housing inquiries/day**, improving efficiency by 90%

Head of Engineering, Head of Outreach, Senior Advisor *Shanghai*
FIRST Robotics Team #6353 (Lightspeed China Partners-backed) *Sep. 2022 - May. 2025*
- Engineering development using Autodesk Inventor, Onshape, and advanced manufacturing (CNC, 3D printing, laser cutting)
- Negotiated **$80K/year partnership** with Lightspeed China Partners, 3-year operational runway
- Scaled **2 Shanghai regional fairs with 2,000+ attendees**; delivered keynote presentations on STEM education

Startup Experience

AI-Driven Handheld Navigation For the Visually Impaired
- **Market Opportunity**: 2.2B visually impaired people worldwide lack accessible navigation tools
- **Solution**: Co-developed **visual + sensor navigation device** with compass-style haptic feedback, obstacle detection success rate 80%+ in beta testing
- **Traction**: Won **¥3,000 hackathon prize**; **intention of investment of $100k** from accessibility orgs and VCs; accepted to **Chongqing Industrial Innovation Park accelerator program (2% acceptance rate)** and **HKUST-Guangzhou early stage program (3% acceptance rate)**
- **Tech Stack**: Python, C++, Next.js, React, ESP32, Computer Vision

AI-Driven Pet Health Collar
- **Market Opportunity**: $160B pet care market; emergency vet visits averaging $800 - $1,500 but are preventable through early detection
- **Solution**: Co-developed **IoT smart collar with embedded ML detecting** stress/seizures with 70%+ accuracy
- **Fundraising**: Raised **$10k angel round** from individual investors; built **MVP with 500+ beta users**; discontinued due to regulatory pathway and difficulty in collecting mass data
- **Tech Stack**: Python (NumPy, Pandas, PyTorch), Swift, JavaScript, Custom PCB Design

Venture Capital Fellowship

Scout *Shanghai*
ZhenFund China *Jun. 2025 - Aug. 2025*
- Sourced and evaluated early-stage investment opportunities by conducting due diligence on 20+ startups.
- Attended internal meetings, learned to write investment memos and scout reports.

Research

Application of Multimodal AI in Robotics *Shanghai*
Generalist Embodied AI Lab @ Tongji University *Jul. 2025 - Aug. 2025*
- Studied and implemented Inverse Kinematics (IK) algorithms for quadruped and hexapod robots using computer vision-based embodied AI for object recognition and approach planning.
- Explored features including ML models that transform audio descriptions into object patterns, mapping routes for robots using CV, and determining leg movements using IK and routing.

Predicting U.S. Stock Market Closing Movement *Shanghai*
Dep. of Computer Science and Engineering @ Shanghai Jiao Tong University *Nov. 2023 - May. 2024*
- Learned and developed a regression model using LightGBM to predict stock movement in the last 10 minutes of daily trading, based on real market quote and transaction data.
- Explored multidimensional features including order book dynamics, historical price trends, weighted averages, and price-spread combinations to reflect market microstructure and short-term price behavior.

Honors

- **USA Computing Olympiad (USACO)** - Platinum Division
- **International Olympiad in Linguistics China (IOLC)** - Individual Gold Medal, Team Silver Medal
- **National Olympiad in Artificial Intelligence (NOAI)** - Individual Silver Medal
- **Shanghai Professional Golf Competition (U18)** - 8th Place in the Annual Ranking
- **AdventureX 2025** - 2nd Place in Enhancing Life with AI Track

Skills

Programming: C++, Python, JavaScript/React/Next.js, Go, Java, APIs, LaTeX, Markdown

Hardware: PCB Design, 3D Modeling (Inventor, Onshape), CNC Machining

AI/ML: PyTorch, Computer Vision, NLP

Interests: Golf, Formula 1, Football, Soccer, Squash, Pickleball, Badminton, Hiking

Languages: Chinese (native), English (bilingual)