

Tao Chen

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Experiences

- Microsoft** Redmond, WA
Jan 2025 - Present
Senior Software Engineer - CoreAI
- Lead engineer and principle architect for **Microsoft Agent Framework**, the successor to Semantic Kernel and AutoGen.
 - Designed and drove the **agentic workflow** system, including a Pregal-style in-process runtime, human-in-the-loop execution, checkpoint, and end-to-end observability.
 - Influenced core architectural decision to ensure scalability, reliability, and developer ergonomics across internal and external users.
- Senior Software Engineer - Office of the CTO* Feb 2023 - Jan 2025
- Lead engineer for **Semantic Kernel**, Microsoft's open-source SDK for building agentic applications with LLMs.
 - Led major initiatives in agent architecture, **multi-agent orchestration**, and observability.
 - Played a key role in bringing the framework to **General Availability (GA)** and scaling adoption to **170M+** monthly Azure OpenAI requests.
 - **Contributed to the OpenTelemetry GenAI Semantic Conventions**, helping define cross-industry standards for LLM and agent observability based on production learnings from Semantic Kernel.
- Software Engineer II - Mixed Reality* May 2022 - Feb 2023
- Key contributor to an end-to-end pipeline enabling large enterprise customers to rapidly prototype and deploy custom computer vision models.
 - Integrated synthetic data generation, model training, and deployment workflows, reducing model prototyping and development cycles from months to **under one week**.
- Xpeng Motors/Xsense.ai** San Diego, CA
Oct 2021 - May 2022
Software Engineer II - Prediction
- Designed and implemented motion prediction algorithms for bicycles and motorbikes in dynamic, safety-critical traffic environments.
 - Successfully deployed prediction models to production autonomous vehicles.
- Software Engineer - Sensor Fusion* Dec 2019 - Oct 2021
- Developed stationary object detection and multi-object tracking algorithms for L2 autonomous driving using radar-camera sensor fusion.
 - Achieved **150m average detection range** and deployed solutions to production vehicles, improving perception accuracy and vehicle safety.
- Robotic Embedded Systems Laboratory (RESL)** Los Angeles, CA
May 2018 - Dec 2019
Research Assistant
- Led research on reinforcement learning for quadrotor control with emphasis on real-world transferability.
 - Built simulation environments using ROS and OpenAI Gym.
 - Developed pipelines to convert trained neural networks into high-performance embedded code for real-time flight control.

Education

- University of Southern California** Aug 2017 - May 2019
Master of Computer Science in Intelligent Robotics, Best Research Award
- Oregon State University** Sep 2014 - June 2017
Bachelor of Computer Science in Computer Systems, Honor Roll, Engineering Scholarship

Publications

- **Sim-to-(Multi)-Real: Transfer of Low-Level Robust Control Policies to Multiple Quadrotors**, IROS 2019.
A. Molchanov*, T. Chen*, et al. [*equal contribution]