

# CONOR MC GARTOLL

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## EDUCATION AND SKILLS

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### University of California, San Diego

*M.S. in Computer Science and Engineering, specialization in AI/Robotics*

Sept. 2025 - Current

### University of California, Los Angeles

*B.S. in Mechanical Engineering with Computer Science Technical Breadth*

Sept. 2018 - June 2022

*Cumulative GPA: 3.81/4.00 (Cum Laude)*

### Technical Skills:

*Languages / Frameworks: Python (PyTorch + Flask) | C++ | JavaScript/TypeScript (basic)*

*AI / Robotics: ROS2 | Motion Planning | Diffusion Policies | Grasp Optimization | HuggingFace (LeRobot) | W&B*

*Simulation: ManiSkill (contributor) | IsaacLab*

*Backend / Infrastructure: REST APIs | AWS | Docker | ETL Pipelines | SQL / NoSQL | Prometheus / Grafana*

## WORK & RESEARCH EXPERIENCE

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### Xiaolong Wang Lab, La Jolla, CA

*Graduate Researcher, Humanoid Robot Manipulation - <https://conor.bot>*

Oct. 2025 - Current

- Built ML optimization, evaluation, and training pipelines in PyTorch for humanoid grasping research
- Developed tooling for rapid iteration over policies using parallel GPU simulation (ManiSkill)
- Integrated mid-level VLM control with low-level policies, focusing on robustness and sim-to-real evaluation
- Evaluated diffusion-based policies across multiple robot platforms (Unitree G1, xArm)

### Lucid Motors, Newark, CA

*Software Engineer II, Powertrain Data and Automation*

Aug. 2022 - May 2025

- Built and owned a production data and monitoring platform (Flask APIs, ETL pipelines, AWS) supporting battery testing hardware, ingesting TBs/week
- Designed customer-facing dashboards and workflows (Grafana) for debugging, observability, and operational decision-making, saving 100+ engineering hours/week
- Software licensed to a major battery supplier; directly influenced \$2M+ hardware investment decisions
- Developed embedded C firmware (FreeRTOS) for real-time temperature control with CAN communication

### Rivian, Normal, IL

*Battery Engineering Intern*

June 2021 - Sept. 2021

- Implemented and validated improved software for testing production battery packs at the end of line, decreasing cycle time by ~25%, saving 100+ hrs/week in the high-pressure months before the release of the R1T car

### UCLA Mechatronics and Controls Lab (MACLab), Los Angeles, CA

*Undergraduate Researcher, under Professor Tsu-Chin Tsao and Dr. Matthew Gerber*

May 2020 - May 2022

- Designed an eye surgery hand tool to improve the safety of cataract surgery by reducing the use of suction within the eye
- Built the tool from the ground up, designing the mechanism of the tool in SolidWorks, and testing prototypes on pig eyes
- Named inventor on patent (US2022165273A1): *Device For Mobilizing Lens Material And Polishing The Capsular Bag*

## PROJECTS

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### Gentle Robotics (Humanoid Teleoperation Project), San Francisco, CA

*Robotics Software Engineer - <https://conor.bot>*

July 2025 - Sept. 2025

- Built a low-latency robot teleoperation pipeline for the Unitree G1 robot using a MetaQuest headset interface, leveraging WebXR for UI, ZeroMQ for messaging, and DDS for low-level robot communication (layer below ROS2)

### LeRobot + Crowd Bot, San Francisco, CA

*Open-Source Community Contributor - <https://conor.bot>*

Aug. 2024 - Mar. 2025

- Trained transformer-based manipulation policies, such as Scrabble word spelling model and a colored cube sorter
- Designed standardized hardware rig (cameras, lighting) for robotics manipulation research; published to [official SO-100 repo](#) for reproducible data collection

## HOBBIES & PERSONAL INTERESTS

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Rock Climbing, Surfing, Spikeball, Classical/Jazz Piano, Embroidery, Unicycling, and Tennis!