JULIEN RINEAU

+1(510)990-7328 ⬦ San Francisco, CA

julien.rineau@berkeley.edu ⬦ [LinkedIn](#) ⬦ [Portfolio](#)

EDUCATION

MSc in Mechanical Engineering, UC Berkeley (USA) — May 2023

Concentration in Robotics and Autonomous systems. Courses: Intro to ML, Deep Reinforcement Learning, Natural Language Processing, Intro to Robotics, Robotic Manipulation, Advanced Control Design I & II,

Combined BSc & MSc in ME, Droped out for MSc at Berkeley, Arts et Métiers Paristech (France) — May 2022

Courses: Advanced Mathematics, Advanced Computer Science, Advanced Electronics/Automatics, Control Theory

EXPERIENCE

CTO & Cofounder — Sept 2024 - Present
[ZeroshotData](#) — *San Francisco, CA*

- Train and deploy VLA models
- Large-Scale Robotics Data Collection [link](#)
- Manage a team of 20+ engineers and 50+ data collectors
- Train World-Model for human manipulation [link](#)
- Design data acquisition pipeline from hedge devices operating system to cloud post processing.

Research Engineer — Aug 2023 - Jun 2024
[Helm.ai](#) — *San Francisco, CA*

- Training SOTA World Diffusion model to generate high-quality synthetic visual data using large-scale distributed training (CUDA, FSDP, DeepSpeed) [link](#).
- Distillation and Quantization of ViT-based models
- Improved segmentation models accuracy (used in production by HONDA) [link](#).
- MLOps: Create annotation tasks for data specialists. Develop internal tools for dataset inspections. Streamline the deployment, monitoring, and maintenance of machine learning models in production environments.

Graduate Student Researcher — Aug 2022 - Aug 2024
[UC Berkeley Hybrid Robotics Group](#) — *Berkeley, CA*

- Diffusion policies for robotic manipulation
- Combined Reinforcement Learning and Model Predictive Control for legged locomotion using Isaac Gym simulation environment
- Designed and implemented successfully a behavior cloning model on a MIT Cheetah quadruped robot using DAgger algorithm, resulting in improved control and computational performances.

SLECTED PROJECTS

- World-Model for human manipulation [link](#)
- Large-Scale Robotics Data Collection [link](#)
- Diffusion Transformer implementation for image generation [link](#)
- Rewrote the whole GPT-2/3 codebase to make it Lightning compatible + Pre-training [link](#)
- Reinforcement Learning Policy for Legged Locomotion [link](#)

PERSONAL

Technical Skills	Python (8 years), C++ (2 years), ROS, Pytorch, Tensorflow, CUDA, Linux, Docker,
Areas of Expertise	Robotics, Model Predictive Control, Deep Learning (RL, VLA, Diffusion, LLM)
Extracurriculars	Judo and Jiu-Jitsu Black Belt, Ranked 5th at National Judo Championship