

Ian Rios-Sialer

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San Francisco, CA

EXPERIENCE

Independent Researcher @ unrulyabstractions.com

June 2025 – Present

AI Safety and Alignment research focused on Interpretability, LLM Bias, and Representation Engineering

- * First author on papers presented at TAIS and workshops at EurIPS and ICML, focusing on LLM Bias and Mechanistic Interpretability
- * Collaborated with Groundless, Apart, Queer In AI, SPAR, and AI Safety Camp on papers targeting NeurIPS and ICLR.
- * Formalized LLM homogenization and developed a framework to measure output diversity; demonstrated occupational gender bias in Claude Haiku in storytelling.
- * Localized representational geometry of temporal preference in large language models using interpretability techniques

Senior Computer Vision Engineer @ Niantic Labs (Acquired by Scopely) March 2020 – April 2025

Led productization of computer vision research for 5 years, shipping AR features in Pokémon Go to millions of users and delivering spatial computing SDKs to enterprise clients. Collaborated cross-functionally with product, UX, and research to define technical roadmaps.

- * Owned client-side development of Niantic's Visual Positioning System (VPS), implementing probabilistic graph algorithms for on-device inference and scoping multi-year technical roadmaps for enterprise integration
- * Architected real-time edge neural inference systems for cross-platform deployment, including AR headsets, solving optimization challenges in computer vision and deep learning
- * Applied LoRA fine-tuning to a learning-based relocalizer as exploratory research toward large 3D foundation models
- * Designed evaluation and visualization systems to analyze interactions between computer vision algorithms, neural networks, and multi-sensor data; led cross-functional experiments, including the Large Space Navigation Drift study

Computer Vision Engineer @ 6D.AI (Acquired by Niantic Labs)

April 2018 – March 2020

As the fourth employee, I enjoyed wearing many hats and moving fast. I worked closely with [Oxford University's Active Vision Lab](#) to create one of the world's first SDKs for real-time 3D reconstruction and Persistent Augmented Reality.

- * Trained and optimized a CNN for monocular depth estimation, enabling real-time occlusions on low-end mobile devices
- * Refactored training pipeline from Caffe to PyTorch and TensorFlow; onboarded first deep learning engineers.
- * Developed a C++ orchestrator for computer vision algorithms and designed C APIs for multi-language integration.
- * Designed and implemented SLAM data pipelines and validation for sensor data (image, tracking poses, intrinsics)
- * Wrote GPU kernels and used Metal Compute Shaders to achieve high-performance computations

Research Engineer @ Civil Maps (Acquired by Luminar)

Jan 2017 – April 2018

I started my career in the Self-Driving Car industry, creating city-scale, high-accuracy 3D Maps for autonomous vehicles

- * Developed 3D depth identifiers for mapping and relocalization using deep learning hashing techniques
- * Collaborated with the Ford Research and Innovation Center to develop and align evaluation metrics for absolute accuracy

EDUCATION

Mechanical Engineering @ University of Michigan, Ann Arbor

Bachelor of Science in Engineering (Magna Cum Laude, 2017)