

Ryan Punamiya

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EDUCATION

Georgia Institute of Technology

May 2025 (BS)

Bachelors in Science, Computer Science; GPA: 4.00/4.00

Concentrations: Intelligence and Theory

Relevant Coursework: DSA, Design and Analysis of Algorithms, Discrete Mathematics, Object Oriented Programming, Linear Algebra I & II, Intro to Artificial Intelligence, Intro to Robotics, Deep Learning, Machine Learning (CS 229 Stanford), Embedded Systems and Programming, Applied Combinatorics

PUBLICATIONS

Simar Kareer¹, Dhruv Patel^{1*}, **Ryan Punamiya^{1*}**, Pranay Mathur^{1*}, Shuo Cheng¹, Chen Wang², Judy Hoffman^{1†}, Danfei Xu^{1†}. "EgoMimic: Scaling Imitation Learning via Egocentric Video". *In submission to International Conference on Robotics and Automation (ICRA), 2025.*

EXPERIENCE

RL2 Lab, Advised by **Dr. Danfei Xu**, Georgia Institute of Technology

August 2023 - Present

Student Researcher

Atlanta, Georgia

- Co-authored **EgoMimic** in submission to ICRA 2025 and accepted to LFDM Workshop at CoRL 2024. Designed an end-to-end transformer-based imitation learning algorithm on human and robot data to improve downstream robot manipulation performance by **34-228%**
- Designed an end-to-end large visual language action model using Diffusion transformer to outperform SoTA by **35%**
- Developed a hand movement prediction model with Vision transformers and LoRA using Project Aria Glasses.
- Engineered a novel shoulder mounted bimanual robot arm system using **Trossen robotics ALOHA** for efficient robot teleoperated data collection

Clyd.ai

November 2023 - Present

Founder

Atlanta, Georgia

- Co-founded a B2B SaaS Startup for consultants with a \$3 Million pre-seed valuation, scaled to 150+ customers in private beta, backed by Startup Exchange Fellowship, Dorm Room Fund
- Built an AI-powered dashboard for consultants that integrates with GSuite, and Office to provide answer client document related queries and streamline client interactions using Graph RAG, Langchain, Cohere, Pinecone

LIDAR Lab, Advised by **Dr. Ye Zhao**, Georgia Tech VIP Program

January 2023 - May 2024

Undergraduate Student Researcher

Atlanta, Georgia

- Designed a novel Deep Convolutional Generative Adversarial Network to reconstruct occluded elevation maps using Pytorch to improve path planning for quadruped robots by 17-19% in traversal tasks.

Robojackets - University Rover Challenge

August 2022 - May 2023

Lead Software Developer

Atlanta, Georgia

- Led a team of 15+ software developers to develop software for Georgia Tech's submission to the University Rover Challenge
- Implemented drone navigation and landing behaviour using ROS and PX4

PROJECTS AND AWARDS

President's Undergraduate Research Award

- Recieved a grant of \$1000 for exceptional research in deep learning for robotics and to present my work at Conference on Robotics Learning 2024.

Partnr., Overall Winner AI ATL Hackathon | *Devpost*

- Developed GenAI driven ReactJS App to centralize client interactions (meetings, emails), streamlining consulting calls. Fine-tuned GPT-4 for Q&A with Gmail, Zoom data, using OpenAI API with LangChain, LlamaIndex for RAG. Used Whisper v3 for meeting transcriptions, Google Flan-T5 for real-time summarization, and Flask for server requests

Roadsense, Winner of \$700 grant from Georgia Tech Grand Challenges Program | *Poster*

- Developed Arduino based embedded system and Android application that uses accelerometer and GPS data to passively detect and map potholes across a city. Implemented AI path-planning algorithms to identify optimal plan of action for pothole repair to minimize traffic.

SKILLS

Languages: C, C++, Java, Python, Node.js, JavaScript, TypeScript, MATLAB, R, HTML/CSS

Developer Tools/Platforms: Ubuntu 18/20/22, Jupyter, Conda, AWS, VS Code, Docker, GitHub, HuggingFace, WSL

Frameworks/Libraries: PyTorch, Tensorflow, OpenCV, Transformers, ROS, **Robosuite**, Scikit-Learn, Langchain, Flask, **Project Aria Tools**, Spline, ReactJS, ThreeJS