Kevin Cui

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Education

Cornell University, College of Engineering

Ithaca, NY

M.Eng in Computer Science

August 2024 - May 2025

• Completed capstone project on backdoor applications of VLMs in autonomous driving contexts, advised by Professor Oliver Gao and Dr. Xi Cheng

B.S. in Computer Science

August 2021 - December 2024

• GPA: 4.061 / 4.3 (summa cum laude)

• **Relevant coursework:** Machine Learning, Artificial Intelligence, Human Robot Interaction, Analysis of Algorithms, Operating Systems, Databases, Honors Object-Oriented Design & Data Structures

Professional Experience

Boston Consulting Group (BCG)

Boston, MA

AI Engineer

June 2024 - August 2024

• Returning full-time in August 2025

- Worked full stack with React and Django Rest Framework to implement a retail pricing tool
- Developed a robust error detailing system for client business sheet uploads

Cornell AutoBoat Project Team

Ithaca, NY

Software Team Lead

May 2024 - May 2025

- Facilitated cross-team collaboration between 50+ members on hardware and software subteams
- Managed codebase migration from ROS to ROS2
- Led creation and development of Unity simulations framework

Perception Subteam Lead

January 2023 - May 2024

• Collected and annotated 18,000 images for training of boat's YOLOv8 custom object detection model Software Developer January 2022 - January 2023

• Implemented algorithms in Python for autonomous navigation tasks

Arizona State University METEOR Studio

Tempe, AZ

Research Intern

May 2023 - August 2023

- Designed adaptive viewport optimizations for a volumetric streaming pipeline
- Integrated spatio-temporal filters into a 3D point cloud rendering system for VR applications

Cornell Institute for Compensation Studies

Remote

Research Specialist Intern

February 2022 - January 2023

- Improved relational database build scripts of public nonprofit data from millions of 990 form e-files
- Invented research-ready public packages in R for relational table building and title taxonomy

Select Projects

Backdoor Attacks on VLMs, M.Eng Capstone Project

Spring 2025

• Demonstrated <u>backdoor attack vulnerabilities</u> of open source vision language models via fine-tuning

LLM-based Language Translation, Software Engineering Course

Fall 2024

• Designed a system for <u>automated code migration</u> between Java and Python using LLMs

OCact-Chess, CS 3110 (Functional Programming) Final Project

Spring 2023

• Collaborated in a group of four to create a <u>terminal-based version of chess</u> in OCaml from scratch

Critter World Simulation, Honors OO Design and Programming Course

Fall 2021

• Collaborated with two partners to produce a <u>simulation of evolving critter life</u>

Technical Skills & Leadership

- Java, Python, C, SQL, OCaml, R, Javascript, Django REST Framework, React, ROS/ROS2, CUDA, PyTorch, GraalVM, Unity, Git, Azure DevOps, Agile, Scientific Writing
- Team Lead of Cornell AutoBoat, Head TA for CS4780 and CS3410, Wall Monitor at Lindseth Climbing Center