

Kevin Cui

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY

Expected May 2025

B.S. and M.Eng. in Computer Science

GPA: 4.07

Relevant Courses: Machine Learning, Functional Programming in OCaml, Analysis of Algorithms, Honors Object-Oriented Design & Data Structures, Operating Systems, Differential Equations

PROFESSIONAL EXPERIENCE

METEOR Studio, Tempe, AZ, *Research Intern*

May - Aug. 2023

- Designed adaptive viewport optimizations for a volumetric streaming pipeline
- Integrated spatio-temporal filters into a 3D point cloud rendering system for VR applications
- Tested and generated metrics for future volumetric streaming improvements

Cornell Institute for Compensation Studies, Remote, *IT Consultant Intern*

Feb. 2022 - Jan 2023

- Improved relational database build scripts of public nonprofit data from millions of 990 form e-files
- Standardized employee titles for future research through fuzzy matching on compensation data
- Invented research-ready public packages in R for [relational table building](#) and [title taxonomy](#)

LEADERSHIP EXPERIENCE

AutoBoat Project Team, Cornell University, *Computer Vision Lead*

Jan. 2023 - Present

- Lead biweekly sprint meetings with 20+ members to delegate responsibilities and manage subteam projects
- Compose documentation for image annotation, model training, and new member onboarding
- Collected and annotated ~18,000 images for training of boat's YOLOv8 custom object detection model
- Implemented algorithms in Python for autonomous navigation tasks

TEACHING EXPERIENCE

Cornell Bowers CIS, Ithaca, NY, *Teaching Assistant*

- **CS 4780**, Machine Learning
- **CS 3410**, Computer Systems Organization
- **CS 2112**, Honors Objected Oriented Design and Programming

Spring 2024

Fall 2023

Fall 2022

SELECT PROJECTS

OCact-Chess, *CS 3110 Final Project*

Spring 2023

- Collaborated in a group of four to create a [terminal-based version of chess](#) in OCaml from scratch
- Personally implemented user interface, king and major piece mechanics, and an exhaustive test suite

Critter World Simulation, *CS 2112 Final Project*

Fall 2021

- Collaborated with two partners to produce a [simulation of evolving critter life](#)
- Personally built a recursive descent parser and interpreter in Java and implemented a GUI in JavaFX

Virulence Gene Study, *Summer Research at Villanova University*

Summer 2020

- Led a five-member student team researching [trends of virulence genes in AMR pathogens](#)
- Performed principal component analysis and hierarchical clustering in R on NPDIB data

Karaoke Shazam, *Independent Research Project*

2018 - 2020

- Created a program in Python to identify user-recorded audio using spectrographic analysis and a CNN

SPECIALIZED SKILLS

Languages: Java, Python, R, OCaml, C, C#, SQL, Javascript, SQL, LaTeX

Frameworks and Technologies: PyTorch, Tensorflow, Matplotlib, NumPy, NetworkX, Jupyter Notebook, Git/Github, ROS, Unity, Microsoft Suite