# David Yan

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## EDUCATION

**Princeton University**                                                             2022 - 2026
*Bachelor of Science in Engineering - Computer Science*                    *Current GPA: 3.971/4.0*

## SKILLS

**Languages**: Python, Golang, Bash, Java, C/C++, LaTeX, MATLAB, R
**Tools/Libraries**: Blender, Pytorch, Unreal, SLURM, Pytest, Numpy, Pandas, Docker, OpenCV, Open3D, Git, UNIX

## PUBLICATIONS

1. Alexander Raistrick*, Lingjie Mei*, Karhan Kaan Kayan*, **David Yan**, Yiming Zuo, Beining Han, Hongyu Wen, Meenal Parakh, Stamatis Alexandropoulos, Lahav Lipson, Zeyu Ma, Jia Deng. Infinigen Indoors: Photorealistic Indoor Scenes using Procedural Generation. *CVPR*, 2024.

## EXPERIENCE

**Computer Vision Research - Princeton Vision and Learning Lab**          January 2023 - Present

- Researching synthetic data generation for machine learning and computer vision (e.g. optical flow, stereo depth)
- Developer for the Infinigen project (CVPR 2023, 2024), a procedural generator of diverse, high-quality training data for computer vision research.
- Created an 3D export utility for Infinigen Indoors (CVPR 2024) with Blender Python scripting that enables the automatic conversion of generated Infinigen assets into standard file formats such as .obj and .ply. The exporter supports *scene-scale* export to the USD file format for embodied agent training in robotics simulators like NVIDIA Omniverse.
- Performed system wide migration of the Infinigen system from Blender 3.0 to 3.6, enabling the project to be structured as a Python package and vastly improving ease-of-install
- Developed automated profiling and CI tools for the Infinigen system using Pytest

**Teaching Assistant**                                                             Feb 2024 - Present

- COS240 (Discrete Math) - Spring 2024

**HackPrinceton Organizer - Operations Team**                          September 2022 - 2024

- Worked closely with team members to manage admissions, housing, and food for over 200+ hackers

**Research Scholar - Research Science Institute**                         June 2021 - August 2021

- Investigated the relationship between human visitation and CO2 levels in Carlsbad Caverns National Park by analyzing CO2 and foot-traffic database

## HONORS AND AWARDS

**Shapiro Prize for Academic Excellence**                                           2023, 2024

- Awarded to the top 3% of Princeton freshman and sophomore students for academic achievement

**U.S. Presidential Scholar**                                                                 2022

- One of 161 U.S. high school graduates chosen and honored by the White House

**Research Science Institute (RSI) Scholar**                                               2021

- One of 52 U. S. high school students chosen to attend the 38th RSI hosted by MIT and Center for Excellence in Education

## PAST PUBLICATIONS

**Co-Inventor of Electrochemically Driven Carbon Dioxide Separator**              2020

- U.S. patent Serial No. 63/027,760, 2020; First to reduce the invention to practice
- Provided the only experimental data used to obtain a $1M research grant from the U.S. Department of Energy
- This patent was licensed for commercialization and has raised $10M in Series A seed funding