

## JIRAPHON YENPHRAPHAI (DOME)

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### INTERESTS

I am interested in the intersection of computer vision and computer graphics. My past projects have focused on 3D reconstruction, aiming to achieve photorealism and enhance image controllability.

### EDUCATION

#### New York University

MS in Computer Science, GPA 3.8/4.0

New York, USA

Sep 2021 – May 2023

#### Chulalongkorn University

BEng in Electrical Engineering, GPA 3.9/4.0

Bangkok, Thailand

Aug 2015 – Aug 2019

### PUBLICATIONS

- **Image Sculpting: Precise Object Editing with 3D Geometry Control**  
Jiraphon Yenphraphai, Xichen Pan, Sainan Liu, Daniele Panozzo, Saining Xie  
CVPR, 2024 (Under Review)
- **NeX: Real-time View Synthesis with Neural Basis Expansion**  
Suttisak Wizadwongsa\*, Pakkapon Phongthawee\*, Jiraphon Yenphraphai\*, Supasorn Suwajanakorn  
CVPR, 2021 (Oral – Best paper candidate)  
Project page / arXiv / video / code
- **NeX360: Real-time All-around View Synthesis with Neural Basis Expansion**  
Pakkapon Phongthawee\*, Suttisak Wizadwongsa\*, Jiraphon Yenphraphai, Supasorn Suwajanakorn  
TPAMI, 2022  
Project page / arXiv

### EXPERIENCE

**New York University**— NYU [X] specializing in Deep learning, Computer Vision and Representation Learning

*Research Scientist advised by Prof. Saining Xie*

July 2023 – Present

- Image editing
  - Devised 3D geometry-controlled object editing via Single Image reconstruction and Stable Diffusion
  - Attained impressive results in image quality and controllability
- Text-to-3D
  - Enhanced personalized text-to-3D generative models for single images with DreamBooth and Stable Diffusion

**New York University**— Center for Cybersecurity and Dice Lab working on AI, machine learning, NLP, and robotics

*Part-time Research Assistant advised by Prof. Nasir Memon*

Jan 2022 – Sep 2022

- DeepFake detection
  - Built a workflow including data acquisition, cleaning, features engineering, and model training

**VISTEC**—The world-class research institute striving towards academic research and cutting-edge technology for society

*Research Assistant advised by Prof. Supasorn Suwajanakorn*

Aug 2019 – Sep 2021

- Neural rendering/View synthesis
  - Improved the 3D rendering from NeRF for a scene using deep learning techniques
  - Enhanced the applicability of the algorithm for web-scraping internet photos by optimizing GANs, ViT, and Sfm
  - Achieved 40% model compression via neural network pruning, mixed precision, and knowledge distillation
  - Simulated a light field camera rig by developing a C++ and Python application to capture multi-view images
- Amazon GO
  - Supervised interns to develop an Amazon Go-like system with face and object recognition
  - Enhanced website performance by optimizing system utilization using the Roofline model
- Computer Graphics
  - Refined real-time rendering on websites, VR, and holograms by developing a WebGL application

**CERN**—The world's largest intergovernmental particle physics laboratory

*Summer Student Intern*

June 2018 – Aug 2018

- Radio-frequency application
  - Built a backend using Flask, HTML, and JavaScript to monitor magnet for an accelerator in real time
  - Increased beam reliability by notifying the team about the problem with 90% greater efficiency

### SKILLS

**Programming:** C/C++, Java, Python, R, HTML, SQL  
**ML frameworks:** TensorFlow, PyTorch, JAX, OpenCV  
Scikit-learn, Numpy, pandas, Diffusers

**Cloud:** Google Cloud, IBM Cloud, AWS  
**Tools:** Travis CI, Docker, Kubernetes, REST API, Flask,  
Nosetests, Behave, Selenium, SQLAlchemy, OpenMP