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 — New York, USA
MS in Computer Science, GPA 3.8/4.0 — *Sep 2021 – May 2023*

Chulalongkorn University — Bangkok, Thailand
BEng in Electrical Engineering, GPA 3.9/4.0 — *Aug 2015 – Aug 2019*

PUBLICATIONS

(* means equal contribution)

- **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)
- **NeX360: Real-time All-around View Synthesis with Neural Basis Expansion**
  Pakkapon Phongthawee*, Suttisak Wizadwongsa*, **Jiraphon Yenphraphai**, Supasorn Suwajanakorn
  TPAMI, 2022

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