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## **Education**

**University of Macao** 

**Technical University of Munich** 

Munich, Germany

M.Sc. in Robotics, Cognition, Intelligence, Grade 1.8/1.0

Oct. 2021 - Nov. 2023

**Technical University of Munich** 

Munich, Germany Oct. 2017 - Sep. 2021

B.Sc. in Mechanical Engineering, Grade 2.5/1.0

Macao, China

B.Sc. in Electromechanical Engineering, Three Semesters GPA 3.6/4.0

Aug. 2014 - Dec. 2015

## Research Experience\_

## Neural Inverse Rendering

Munich, Germany

Visual Computing & Artificial Intelligence Lab, TUM

Feb 2023 - Nov 2023

- Implement a differentiable path tracer to decompose NeRF scenes, distinguished by more accurate material and more realistic shading.
- Create synthetic datasets from Blender for an in-depth evaluation of model performance.

### O Images Relighting and Material Editing

Munich, Germany

Visual Computing & Artificial Intelligence Lab, TUM

Apr. 2022 - Sep. 2022

 Lead a three-student team in applying ray tracing for light visibility estimation in the NeRF relighting task, reducing computation time from 150+ hours to 5 minutes.

7 3D Visual Grounding

Munich, Germany

Visual Computing & Artificial Intelligence Lab, TUM

Sep. 2021 - Mar. 2022

• Incorporate graph neural networks and NLP to model the spatial relationships among object proposals, generating surrounding-aware features.

#### **Graph Neural Networks for Gear Transmission Development**

Munich, Germany

Chair of Machine Elements, TUM

TUM Campus Run 2023

Mar. 2021 - Sep. 2021

• Employ graph neural networks to understand and predict the relationships between components of gear transmissions.

#### **Physics-Informed Machine Learning for Rogue Wave Prediction**

Munich, Germany

Associate Professorship of Thermo-Fluid Dynamics, TUM

Oct. 2020 - Feb. 2021

May 2023

• Demonstrate the potential of neural networks in solving challenging numerical problems.

# **Extracurricular Activity**

Team Runner Munich, Germany

Teaching Assistant Mathematics Munich, Germany

Preliminary Course in Higher Mathematics, TUM Sep. 2018 - Nov. 2018

Student Assistant Munich, Germany

TUM Open Doors Day Oct. 2017

Manufacturing Intern

Hamburg, Germany

MES Marine Engine Service GmbH

Jun. 2027 - Oct. 2027

Volunteer Leader Macao, China

Macao International Marathon Dec. 2015

Student Leader Macao, China

Shiu Pong College House Association, University of Macao Aug. 2015 - Dec. 2015

## Skills

**Programming** Python (proficient), C++ (intermediate), MATLAB (intermediate), HTML (intermediate)

**Tools** PyTorch, TensorFlow, Blender, Mitsuba, CATIA, Gurobi, LaTeX, Git, Linux

**Languages** Chinese (native), Cantonese (native), English (C1), German (C1)

**Hobbies** Skiing (50+ Days), Snowboard (Beginner), Basketball (PF/SF), Photography (10+ Years)