JIAHAO NIE

(65) 80324128 ⋄ jnie002@e.ntu.edu.sg ⋄ Website

Nanyang Technological University, 50 Nanyang Avenue, Singapore, 639798

EDUCATION

Northwestern Polytechnical University (NWPU), China　　　　*Sep. 2016 - Jun. 2020*
B.ENG. in Information Engineering
Outstanding Grauduate
GPA: 87.94/100　**Ranking: Top 10%**
TOEFL: 104 (R28+L29+S22+W25)　**GRE: 319** (Q170+V149+AW3.5)
Highlighted Courses: C Programming (96/100), Machine Learning (90/100), Signals & Systems (94/100), Circuit Analysis (90/100), Information Theory & Coding (98/100), Digital Electronic Technique (90/100), Digital Signal Processing (93/100), Principles of Automatic Control (92/100)

Nanyang Technological University (NTU), Singapore　　　　*Aug. 2021 - Present*
M.S. in Signal Processing

RESEARCH EXPERIENCE

Research Interest

Computer Vision, Machine Learning, Person Re-Identification, Infrared & Visible Visual Tasks

Navigation Technology Engineering Center Laboratory, Tsinghua University
Summer Intern　　　　*Jul. 2019 - Aug. 2019*
· **Supervisor:** Prof. Qi Wei
· Researched, summarized and compared design principles, manufacturing methods and indicators
· Proposed personal feelings and opinions on industry development
· Put forward the scheme of improving Angle sensor to displacement sensor and points for attention

Center of Intelligent Acoustics and Immersive Communications, NWPU
Research Assistant　　　　*Aug. 2020 - Jul. 2021*
· **Supervisor:** Prof. Jie Chen
· Proposed a new method to recognize different actions in Infrared videos
· Adopted 3D Convolutional Neural Networks, Residual Fully-Connected Layers and Trasfer Learning Strategy to achieve the state-of-the-art results
· Collected two well-designed Visible & Infrared image datasets for different tasks.
· Complete 1 work and accepted by IEEE ICICSP 2021

Rapid-Rich Object Search Lab, NTU
M.S. Dissertation Project　　　　*Sep. 2021 - Present*
· **Supervisors:** Prof. Yap-Peng Tan and Dr. Shan Lin
· Researched on Visible & Infrared Person Re-Identification

PUBLICATION

A Novel 3D Convolutional Neural Network for Action Recognition in Infrared Videos
Jiahao Nie, Longbin Yan, Xiuheng Wang, Jie Chen

IEEE International Conference on Information Communication and Signal Processing, **ICICSP 2021**

OTHER PROJECT

ROV I & II, NWPU,
Chinese National College Student Innovative Entrepreneurship Project
Team Leader   *May. 2018 - Aug. 2019*

· Utilized propeller, steering gear and solenoid valve for a water spraying and vector propulsion method
· Used STM32 SCM and ZigBee to realize wireless control of ROV movement
· Configured camera and multiple sensors for additional functionality

Kinect and Sensor based Smart Home System, NWPU,
Chinese National College Student Innovative Entrepreneurship Project
Team Leader   *May. 2018 - Apr. 2019*

· Utilized propeller, steering gear and solenoid valve for a water spraying and vector propulsion method
· Used STM32 SCM and ZigBee to realize wireless control of ROV movement
· Configured camera and multiple sensors for additional functionality

Research and Implementation of Head Pose Estimation in Video, NWPU,
Graduation Design
Grade: 92/100   *Oct. 2019 - Jul. 2020*

· Recognized the direction of human head rotation for the input camera
· Adopted neural network algorithm to further improve the camera recognition accuracy
· Combined with Instance Segmentation and Holographic projection to improve the display results

ACTIVITY

Vice Chairman of Student Union,
School of Marine Science and Technology, NWPU   *2017 - 2019*

Several voluntary activities,
including 1V1 Helping and Supporting Rongshui Students, short-term volunteer teaching   *2017 - 2019*

Chief Volunteer,
China Marine Vehicle Design and Manufacture Contest   *2017*

HONOR & AWARD

NWPU School-level Outstanding Student Award (three times & Top 15% student) *2017 - 2019*

NWPU Special Scholarships (four times & Top 8% student)   *2017 - 2019*

NWPU Outstanding Graduate of the University (Top 6% student)   *2020*

NWPU Outstanding Graduate of the School (Top 15% student)   *2020*

Four national awards,
including China Marine Vehicle Design and Manufacture Contest Outstanding Winner   *2017 - 2019*