

# LIU Yunfei

Final Year (Ph.D Candidate)  
Computer Science & Engineering  
at Beihang University @ VR Lab

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## Links

Github:// **DreamTaleCore**  
Google Scholar:// **Liu-Yunfei**

## Skills

### OS

GNU/Linux, Windows, ROS

### LANGUAGES

C/C++, Java, Python, C#, MATLAB

### FRAMEWORK

Qt, Android, Dash  
Tensorflow, PyTorch, Keras,  
OpenCV, OpenGL, Torch

### OTHERS

Markdown, Git, Shell,  
VS Code, Visual Studio,  
Android Studio, Latex, CET-6,  
Photoshop, PPT, Auto CAD, Inventor

## Coursework

Data Structures  
Algorithm  
Pattern Recognition  
Discrete Mathematics  
Operating Systems  
Data Analysis

## Education

2013-2017

B.SC. DEGREE

Beijing Institute of Technology  
School of Computer Science and  
Technology

2017-Now

PH.D DEGREE

Beihang University  
School of Computer Science and  
Engineering  
State Key Lab of Virtual Reality  
Technology and Systems

## Experience / Projects

2016.07-2016.09 **Da-Jiang Innovations (DJI), SZ**

**Summer Camp**

Collaborative work of unmanned vehicle and drone: My project is to design algorithms for computer vision, task logic, multi-agent communication. The unmanned vehicle and drone work collaboratively and automatically for dragging, transporting, and placing objects.

*Python, C/C++, ROS, Numpy, OpenCV, Shell, Arduino, Embedded System*

2017.2-2017.5 **Da-Jiang Innovations (DJI)**

**Visual Perception Group Intern**

Video ripple-artifact removal: Videos captured by the drone are usually affected by the jitters and vibrations. My task is to remove such artifacts by using IMU data in real-time.

Ground station design: Design a Windows APP for visualizing and interaction various modals of data.

*C++, OpenCV, Qt*

## Publications / Challenges

CVPR-2020 **Unsupervised Learning for Intrinsic Image Decomposition from a Single Image**

Yunfei Liu, Yu Li, Shaodi You, and Feng Lu

AAAI-2020 **Separate in Latent Space: Unsupervised Single Image Layer Separation (Oral)**

Yunfei Liu and Feng Lu

ECCV-2020 **Reflection Backdoor: A Natural Backdoor Attack on Deep Neural Networks**

Yunfei Liu, Xingjun Ma, James Bailey, and Feng Lu

MM-2020 **What I See Is What You See: Joint Attention Learning for First and Third Person Video Co-analysis**

TPAMI-2020 **First- And Third-person Video Co-analysis By Learning Spatial-temporal Joint Attention**

ICCVW-2019 **Physics Based Vision meets Deep Learning** First-prize winner

CADC-2015 **China international Aircraft Design challenge** First-prize (6/67)

## Awards

First Prize in National Competition

National Scholarship

Other first prizes  $\times 5$

First Prize in International Competition

Chancellor's Scholarship

Other second prizes  $\times 7$