

# Lin ZHANG

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## EDUCATION

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### Bachelor of Science in Computer Science & Mathematics

The Hong Kong University of Science and Technology, Hong Kong

Sept 2016 - Present

- CGA: 3.977/4.3

### Undergraduate Exchange

ETH Zurich, Switzerland

Sept 2018 - Feb 2019

## RESEARCH & PROJECTS

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### Few-Shot Object Detection without Finetuning

Prof. Chi-Keung Tang & Prof. Yu-Wing Tai | HKUST

Sept. 2019 - Present

- Designed a two-stage finetuning-free few-shot object detection model based on FCOS and Faster R-CNN
- Applied novel feature similarity comparison in training stage
- Achieved SOTA result on PASCAL VOC 2007 and ImageNet 2015 selected 50 classes, surpassing previous SOTA by more than 10% in mAP

### Deep Video Interpolation and Extrapolation

Prof. Chi-Keung Tang & Prof. Yu-Wing Tai | HKUST

Feb. 2019 - Sept. 2019

- Interpolated and extrapolated video frames and segmentations within 1s long interval on Cityscape dataset
- Tracked fore-ground objects in nearby frames and generate objects in a posture-aware strategy
- Used High Resolution Network as generator and PatchGAN as discriminator to improve video consistency and local details

### Joint Video Object Detection and Tracking via Tracklet Memory

Dr. ZhaoPeng CUI | ETH Zurich CVG [Link](#)

Sept. 2018 - Jan. 2019

- Designed and implemented a time series tracklet memory module based on RFCN to link frame detection results into video detection result, thus achieving jointly detection and tracking

### Machine Learning for Building AI Teaching Assistants

Prof. Dit-Yan YEUNG | HKUST

June. 2018 - Aug. 2018

- Improved duplicate question detection accuracy on Quora Question Pairs Dataset
- Produced artificial examples by using Autoencoder for data augmentation
- Built bidirectional RNN, GRU, LSTM models
- Highest accuracy on validation set reaches 0.84+ using bidirectional GRU.

### Analytics and Recommendation for User Location Data

Prof. Shueng-Han Gary Chan | HKUST

Feb. 2018 - May. 2018

- Built Android application to detect MiniBeacons RSSI signals and calculate user locations based on beacon network
- Built database and create web framework using Django
- Communication of user location data between local devices and central database
- Visualized user's location information on mobile devices and website

### Software Developer in HKUST Robotics Team - Smartcar Subteam

Prof. Kam Tim WOO | HKUST

Sept. 2016 - July. 2017

- Designed real-time camera algorithm for robot to recognize various complex tracks

- Coded with C++ on microcontrollers to control the balance and movement of the robot using PID control
- Achieved 1m/s speed in the competition

## COMPETITIONS

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### HackUST 2018

1<sup>st</sup> Runners-up of Transportation Group, HKUST [Link](#)

*Apr. 2018*

- Provided parking lot vacancy information for users.

### The 12<sup>th</sup> NXP Cup Intelligent Car Racing Competition

The 3<sup>rd</sup> Class Award in Balance Car Category, South China Region [Link](#)

*July. 2017*

### The HKUST 8<sup>th</sup> Robot Design Contest

1st Runner Up & Most Cost-Effective Award, HKUST [Link](#)

*Nov. 2016*

## EXTRACURRICULUM

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### The HKUST 9<sup>th</sup> Robot Design Contest

Peer Mentor

*Sept. 2017 - Dec. 2017*

- Led and taught a group of junior members to build a robot for the contest

## HONORS & AWARDS

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- HKSAR Government Scholarship (2016-2020)
- Kerry Holdings Limited Scholarship (2016-2020)
- Lee Hysan Foundation Exchange Scholarships (2019)
- Dean's List (2016-2018)

## SKILLS

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- Languages: C/C++, Python, MATLAB, Java, JavaScript
- Toolkits: PyTorch, TensorFlow, Android, OpenGL, Spark