# Lin ZHANG

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## EDUCATION

**Bachelor of Science in Computer Science & Mathematics**
**The Hong Kong University of Science and Technology, Hong Kong** *Sept 2016 - Present*
- GPA: 3.977/4.3, top 1% | COMP Course: 4.150/4.3 | MATH Course: 4.022/4.3
- Courses: Computer Graphics | Honors Object Oriented Programming and Data Structure

**Undergraduate Exchange**
**ETH Zurich, Switzerland** *Sept 2018 - Feb 2019*
- Courses: Advanced Machine Learning | Computer Vision | Data Mining | Probabilistic Artificial Intelligence

## RESEARCH

**One-Shot Object Detection without Finetuning**
**Computer Vision | Prof. Chi-Keung Tang & Prof. Yu-Wing Tai | HKUST** *Sept. 2019 - Nov. 2019*
- Designed a two-stage finetuning-free one-shot object detection model based on FCOS and novel training strategies
- Surpassed previous SOTA by 12.1 mAP points (30%) on PASCAL VOC 2007 dataset
- In submission to a major conference in 2020

## PROJECTS

**Deep Video Interpolation and Extrapolation**
**Computer Vision | Prof. Chi-Keung Tang & Prof. Yu-Wing Tai | HKUST** *Feb. 2019 - Sept. 2019*
- Interpolated & extrapolated video frames and segmentations within 1s interval on Cityscape
- Proposed tracking-based foreground-background separation generation strategy
- Applied HRNet-PatchGAN model to improve video consistency and local details

**Joint Video Object Detection and Tracking via Tracklet Memory**
**Computer Vision | Dr. ZhaoPeng CUI | ETH Zurich CVG** *Sept. 2018 - Jan. 2019*
- Designed and implemented a time series tracklet memory module based on Faster-RCNN

**Machine Learning for Building AI Teaching Assistants**
**Natural Language Processing | Prof. Dit-Yan YEUNG | HKUST** *June. 2018 - Aug. 2018*
- Detected duplicate questions on Quora Question Pairs Dataset, highest accuracy reaches 85.89%.
- Built bidirectional sequential deep learning models and used Autoencoder for data augmentation

**Analytics and Recommendation for User Location Data**
**Indoor Localization | Prof. Shueng-Han Gary Chan | HKUST** *Feb. 2018 - May. 2018*
- Built Android application to detect MiniBeacons RSSI signals and achieve Indoor Localization
- Built database and web framework using Django supporting communication of user location

## COMPETITIONS

**HackUST in HKUST** *Apr. 2018*
**Entrepreneur | 1st Runners-up of Transportation Group | 95 teams**
- Proposed to provide parking lots vacancy consultation and implemented a web demo

**The 12th NXP Cup Intelligent Car Racing Competition in South China Region** *July. 2017*
**Robotics | The 3rd Class Award in Balance Car Category | 64 teams**
- Implemented PID controllers and Kalman filtering on gyroscope and accelerometer to control robot motion
- Designed real-time camera algorithms to recognize tracks and find shortest path

**The 8th Robot Design Contest in HKUST** *Nov. 2016*
**Robotics | 1st Runner Up & Most Cost-Effective Award | 123 participants**
- Coded with Keil embedded toolkit on ARM architecture
- Designed recognition algorithms for a racing car and wireless control system for a shooting robot

## EXPERIENCE

**Peer Mentor of HKUST 9th Robot Design Contest**
**Robotics | HKUST** *Sept. 2017 - Dec. 2017*
- Led and taught a group of new members to design and build robots

**Software Developer in HKUST Robotics Team – Intelligent Car Sub Team**
**Robotics | Prof. Kam Tim WOO | HKUST** *Sept. 2016 - July. 2017*
- Represent HKUST to join Intelligent Car Racing Competition

## HONORS & AWARDS

- HKSAR Government Scholarship, HKD 80000 per year, ~100 among all university students, 2016-2020
- Lee Hysan Foundation Exchange Scholarships, HKD 13000, 11 among all fall 2018 exchange students,2019
- Kerry Holdings Limited Scholarship, HKD 60000 per year, ~20 among all non-local new UG students, 2016-2020
- Dean's List, for students with term grade average above 3.7, 2016-2018

## SKILLS

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