

Ling Luo

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Education

- 2016-2019 MASTERS in Information Security at Beijing University of Posts and Telecommunications. GPA:3.44/4.
Research focus: Machine Learning & Computer Vision
- 2012-2016 BACHELOR OF SCIENCE in Information Security at Beijing University of Posts and Telecommunications. GPA:3.4/4 Rank: top 15%.

Projects & Experiences

- 2017-2018 Internship at [Deepwise Co.Ltd](#) Research Institute. We used deep learning methods to detect calcification and masses in mammograms(X-ray of breasts) as early diagnosis of breast cancer. As the main researcher, my work contains:
1. Develop microcalcification detection algorithms using Student's t-test loss to learn different residuals. By putting constraints directly on the residual distribution of each category, microcalcification can be significantly distinguished from normal tissues.
 2. Develop mass detection and segmentation algorithms using bilateral mammograms based on Mask-RCNN. By redesigning data flow and network, differences between bilateral breasts are introduced which prove to reduce false positives and increase recall.
- Both work has been productized and deployed in several hospitals.
- 2017 Reconstruction-based Robust Pavement Crack Detection: Proposed a novel network using reconstruction loss to enforce segmentation performance since crack detection is more like an abnormal detection task. This program is aimed for transportation maintenance, and the proposed method shows better generality among different road conditions.
- 2017 [Wechat chatbot based on Rasa NLU](#): Developed an chatbot for Wechat by combining Rasa NLU(natural language understanding) Rasa Core(dialogue manager) and Wechat api. More details can be seen in [my blog](#).
- 2017 [Baidu Meizu deep learning Application Contest](#): Developed an attention-based arithmetic recognition algorithms for four fundamental admixture operations of arithmetic and ranked **8/206**.
- 2017 [Tianchi Lung Nodule Analysis Contest](#): Designed two networks to detect the nodule candidates and reduce false positive rate respectively and ranked **64/2887**. More details can be seen in [my blog](#).

- 2015 Internship at [Center for Speech and Language Technology \(CSLT\)](#) : Evaluated 6 word embedding models using NLP tasks to provide benchmark for new embedding models.
- 2015 The 5th National Colleges Information Security Contest : Designed and learned the features of manifest files and smali code to detect Android malware using Random Tree Algorithms.
- 2015 The Colleges Innovation Contest: Developed a mobile puzzle game with Unity 5.0 using C#.
- 2015 2015 Mathematical Contest in Modeling: Proposed a routes optimization model for searching planes crashed in open water, which won **Honorable Mentioned** prize.

Skills

Programming	Python, Java, SQL, \LaTeX , MATLAB
Tools	Git, Pytorch, Tensorflow, Caffe, Unity3D
Language	Chinese Mandarin (native), English (TOEFL 104, IELTS 7.0, GRE 324)