Xinyue Feng

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EDUCATION

Nanjing University **Nanjing, China**
M.S. in Statistics **2019 – 2022 (Expected)**
GPA: *3.86/4.0 (Ranking: 1st/15)*

Sun Yat-sen University **Guangzhou, China**
B.S. in Statistics **2015 – 2019**
GPA: *3.74/4.0*

PUBLICATION

Xinyue Feng, Chuxiao Zuo, Wujun Li. **Robust Hashing Learning via Random Smoothing.** 2021 (working paper)

PATENTS

Xinyue Feng, Wujun Li, Song Zhou. **Building surface crack detection method based on image processing**. Patent No.201911371906. 2020

Xinyue Feng, Wujun Li, Song Zhou. **Image-based bridge crack detection method**. Patent No.201911371902. 2020

RESEARCH EXPERIENCE

Robust Hashing Learning via Random Smoothing
LAMDA Group, the Department of Computer Science and Technology **Sep.2020 – present**
Proposed Method: *Propose a certified defense method called Smoothing Hashing (SH) to build a robust hashing model towards adversarial perturbations by adding Gaussian noise..*
Contribution:

- *The first defense method of hashing based retrieval model*
- *Significantly improve the robust accuracy: MNIST(+64.2%), CIFAR10(+81.4%), NUSWIDE(+62.6%)*
- *It is supported theoretically*

A Noise-Robust Method for Crack Segmentation
LAMDA Group, the Department of Computer Science and Technology **Oct. 2019– Jan.2020**
Proposed Method: *Propose a noise-robust crack segmentation method that consists of two steps: Multi-direction Non-minimum Suppression and pixel expansion-based crack connection.*
Contribution:

- *More robust to the noise than existing crack segmentation algorithms*
- *Obtain more continuous cracks, which provides a good foundation for subsequent crack analysis.*

Segmentation of Pectoral Muscle in Mammograms (Best B.S. thesis)
Computational Medical Imaging Laboratory **Oct.2018 – Jun.2019**

Proposed Method: *Propose a novel pectoral muscle segmentation method combining the deep method and the non-deep method, so that the traditional algorithm can refine the results of the deep neural network.*

Contribution:

- *The first attempt to combine traditional techniques and deep learning methods in pectoral muscle segmentation*
- *Achieves state-of-the-art performance: DDSM(+0.6%), MIAS(+1.4%), Inbreast(+0.8%),cases provided by three cooperative hospitals(+0.6%)*

COMPETITION

- 26/1681 (Top 2%). CVPR2021 Security AI Challenger **2021**
- First Prize (Top 1%), China Undergraduate Mathematical Contest in Modeling **2017**

HONORS AND AWARDS

- HUAWEI Fellowship, NJU **2020**
- First Prize (Top 5%), Excellent Student Scholarship, NJU **2020-2021**
- University-level Excellent Graduation Thesis, SYSU **2019**
- First Prize (Top 5%), Excellent Student Scholarship, SYSU **2016-2019**

SKILLS

- **Programming Language:** *Python, MATLAB, C/C++, R, SQL*
- ***Tools:*** *PyTorch, Tensorflow, OpenCV*