Jiaxin Gu

Phone: (+86) 132-4032-1672   **E-mail:** jxgu1016@gmail.com
Homepage: https://jxgu1016.github.io   **GitHub:** https://github.com/jxgu1016

EDUCATION

- 2017.9-2020.1, Beihang University, M.S. in Pattern Recognition and Intelligent System (3/30)
- 2013.9-2017.6, Beihang University, B.Eng. in Automation Science (4/210+)

SELECTED PUBLICATIONS

- Projection Convolutional Neural Networks for 1-bit CNNs via Discrete Back Propagation,
  Jiaxin Gu, Ce Li, Baochang Zhang, Jungong Han, Xianbin Cao, Jianzhuang Liu, David Doerman.
  *The Thirty-Third AAAI Conference on Artificial Intelligence (**AAAI, Oral**), 2019.*
- Circulant Binary Convolutional Networks: Enhancing the Performance of 1-bit DCNNs with Circulant Back Propagation,
  Chunlei Liu, Wenrui Ding, Xin Xia, Baochang Zhang, **Jiaxin Gu**, Rongrong Ji, Jianzhuang Liu.
  *IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019.*
- One-two-one networks for compression artifacts reduction in remote sensing,
  Baochang Zhang*, **Jiaxin Gu*,** Chen Chen, Jungong Han, Xiangbo Su, Xianbin Cao, Jianzhuang Liu. *ISPRS Journal of Photogrammetry and Remote Sensing (Top Journal in RS), 2018.*
- Deep-Patch Orientation Network for Aircraft Detection in Aerial Images,
  Ali Maher, **Jiaxin Gu**, Baochang Zhang. *Advances in Image and Graphics Technologies.* 2017.

SKILLS

- Knowledgeable in **DL model compression and acceleration, compression artifacts reduction, object classification and detection, machine learning.**
- Experienced in Python, MATLAB, C/C++, Shell. Familiar with Linux environment and CUDA.
- Proficiency with **PyTorch** (torchvision contributor), able to write *cpp-extension* and Caffe.
- Excellence in academic reading, writing and illustrations drawing. CET4: 592, CET6: 572.

INTERNSHIP

- **Microsoft Research Asian (MSRA)** *Data Knowledge Intelligence* Group   2019.05-Now
  Machine learning applied on Azure with massive data, so as to predict server status and optimize resources allocation.

SELECTED PROJECTS

- **Hawei Hisilicon AI Chip Project (Project Da Vinci): Design and Application of 1bit CNNs**
  Main contributor
  To design an advanced algorithm to maintain the performance of CNNs with both the weights and activations binarized. We achieve the state-of-the-art classification accuracy of 1bit CNNs on ImageNet. This algorithm is planned to be applied on the AI chip, *Ascend.*
- **Implementation of Center Loss on PyTorch**   **Owner**
  A popular third-party implementation of center loss with 200+ stars on GitHub.

SELECTED AWARDS&HONORS

- Guorui Scholarship(top 2 of school), 2018
- Outstanding Student, 2016&2018
- National Endeavor Scholarship, 2015
- First-class Academic Scholarship, 2018
- Honorable Mention, MCM/ICM, 2016
- First-class Academic Scholarship, 2015

顾佳昕

手机: (+86) 132-4032-1672　**邮箱:** jxgu1016@gmail.com
个人主页: https://jxgu1016.github.io　**GitHub 主页:** https://github.com/jxgu1016

教育经历

- 2017.09 至 2020.01 北京航空航天大学 模式识别与智能系统 硕士(推免)　　　　班级排名：3/30
- 2013.09 至 2017.06 北京航空航天大学 自动化 学士　　　　专业排名：4/210+

科研经历

- Projection Convolutional Neural Networks for 1-bit CNNs via Discrete Back Propagation,
  Jiaxin Gu, Ce Li, Baochang Zhang, Jungong Han, Xianbin Cao, Jianzhuang Liu, David Doerman.
  *The Thirty-Third AAAI Conference on Artificial Intelligence (**AAAI, Oral**), 2019.*
- Circulant Binary Convolutional Networks: Enhancing the Performance of 1-bit DCNNs with Circulant Back Propagation,
  Chunlei Liu, Wenrui Ding, Xin Xia, Baochang Zhang, **Jiaxin Gu**, Rongrong Ji, Jianzhuang Liu.
  *IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019.*
- One-two-one networks for compression artifacts reduction in remote sensing,
  Baochang Zhang*, **Jiaxin Gu***, Chen Chen, Jungong Han, Xiangbo Su, Xianbin Cao, Jianzhuang Liu. *ISPRS Journal of Photogrammetry and Remote Sensing (遥感图像处理顶刊), 2018.*
- Deep-Patch Orientation Network for Aircraft Detection in Aerial Images,
  Ali Maher, **Jiaxin Gu**, Baochang Zhang. *Advances in Image and Graphics Technologies. 2017.*

专业技能

- 硕士期间重点研究**机器学习**、**深度学习模型压缩与加速**、**图像压缩效应修复和目标识别与检测**问题，发表顶会论文 2 篇、顶刊论文 1 篇, 投稿 **ICCV2019** 一篇(**4 weakly accepted**).
- 熟悉 Linux 开发环境，掌握 Python、MATLAB、C++、shell 等编程语言，熟悉 CUDA 并行编程.
- 熟悉深度学习 **PyTorch** 框架(torchvision 的 contributor)，擅长编写扩展模组，熟悉 **Caffe** 平台; 实现论文 Center loss 的 PyTorch 版代码，并在 GitHub 上获得 200+的 stars.
- 具备优秀的文献阅读与写作能力，CET4: 592, CET6: 572; 熟练使用 Latex 排版，擅长绘制论文插图.

实习经历

- **微软亚洲研究院(MSRA)** *Data Knowledge Intelligence* 组　　　　2019.05-至今
  对 Azure 的海量数据进行机器学习建模，以预测服务器状态和优化资源配置.

项目经历

- **华为海思 AI 芯片项目（达芬奇计划）——1bit 卷积神经网络的设计与应用**　　　　**主要参与者**
  在同时二值化卷积核与输入特征的条件下，通过增加一定比例的额外运算，使得 1bit 卷积神经网络在华为"昇腾"AI 芯片上达到合同要求的精度。该项目为实验室 CVPR 与 AAAI 工作的落地化成果.
- **航天四院东风某型号导弹目标检测系统开发**　　　　**前期参与者、方案制定者**
  在弹载处理器计算能力有限的情况下，利用传统图像均值、方差、HOG 等手工特征，结合改进后的 SVM 算法，完成海上目标检测任务.

曾获奖励

- 中电十四所国睿奖学金(学院仅 2 人)，2018
- 北航优秀生，2016；优秀研究生，2018
- 国家励志奖学金，2015
- 北航学业一等奖学金(前 20%)，2018
- 美国大学生数学建模大赛二等奖，2016
- 北航学习优秀一等奖学金，2015