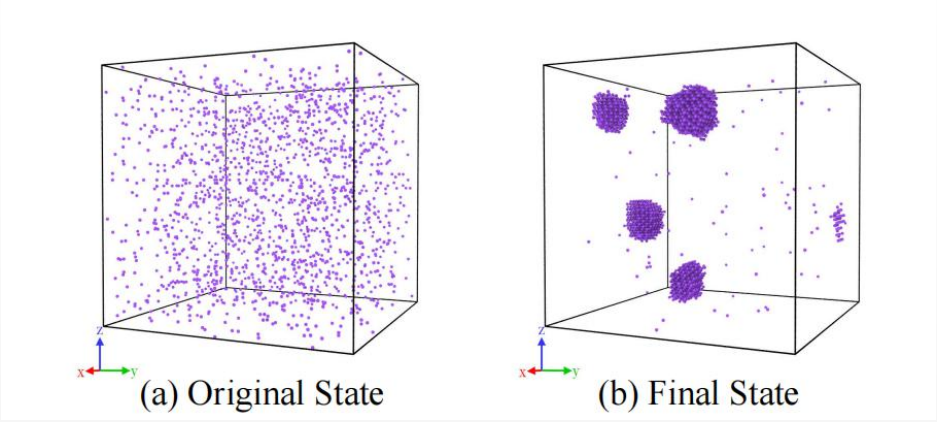
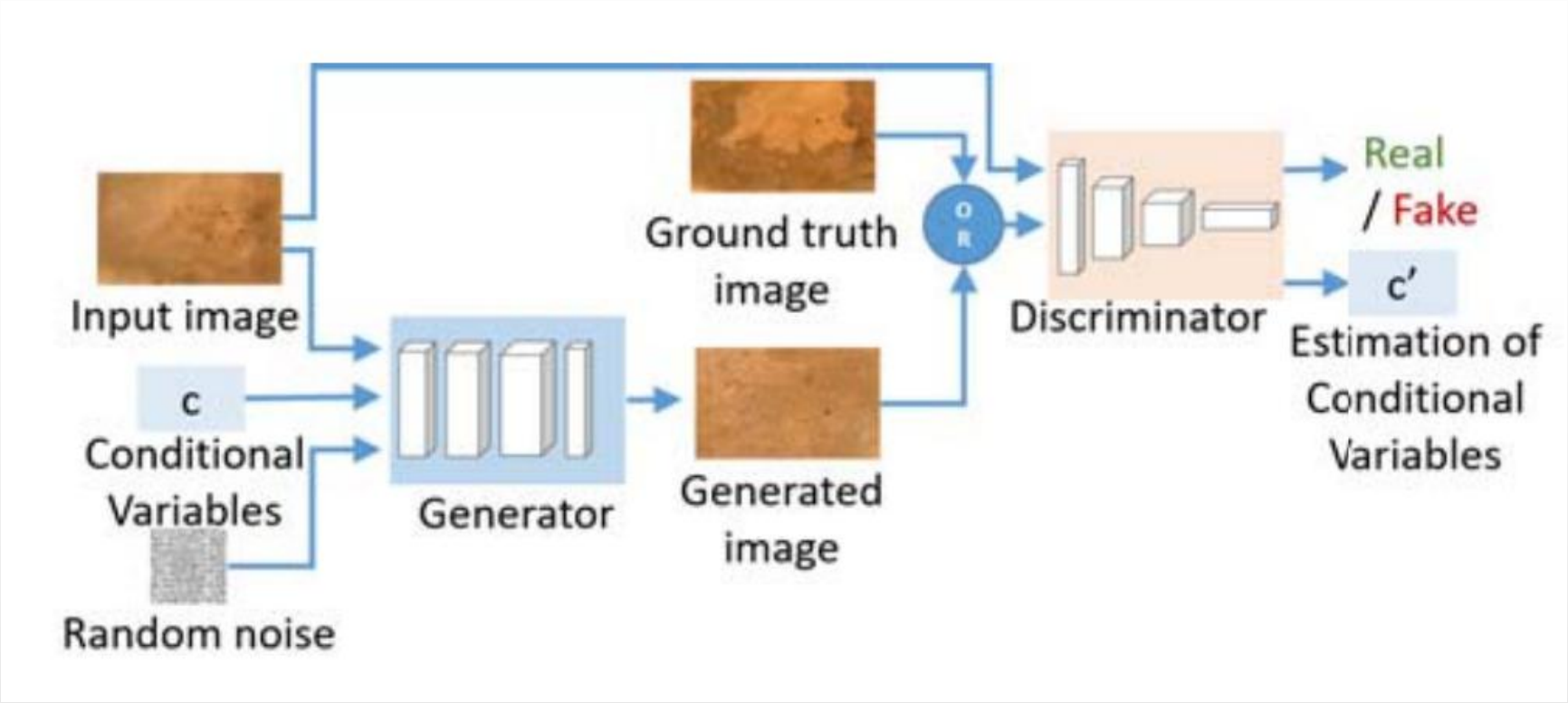
2021.9.27组会

徐磊

KMC相关：KMC模拟与cv的人脸老化问题



KMC相关：CGAN网络



Papadopoulos, S., et al. (2018). Modelling of Material Ageing with Generative Adversarial Networks. 2018 IEEE 13th Image, Video, and Multidimensional Signal Processing Workshop (IVMSP).

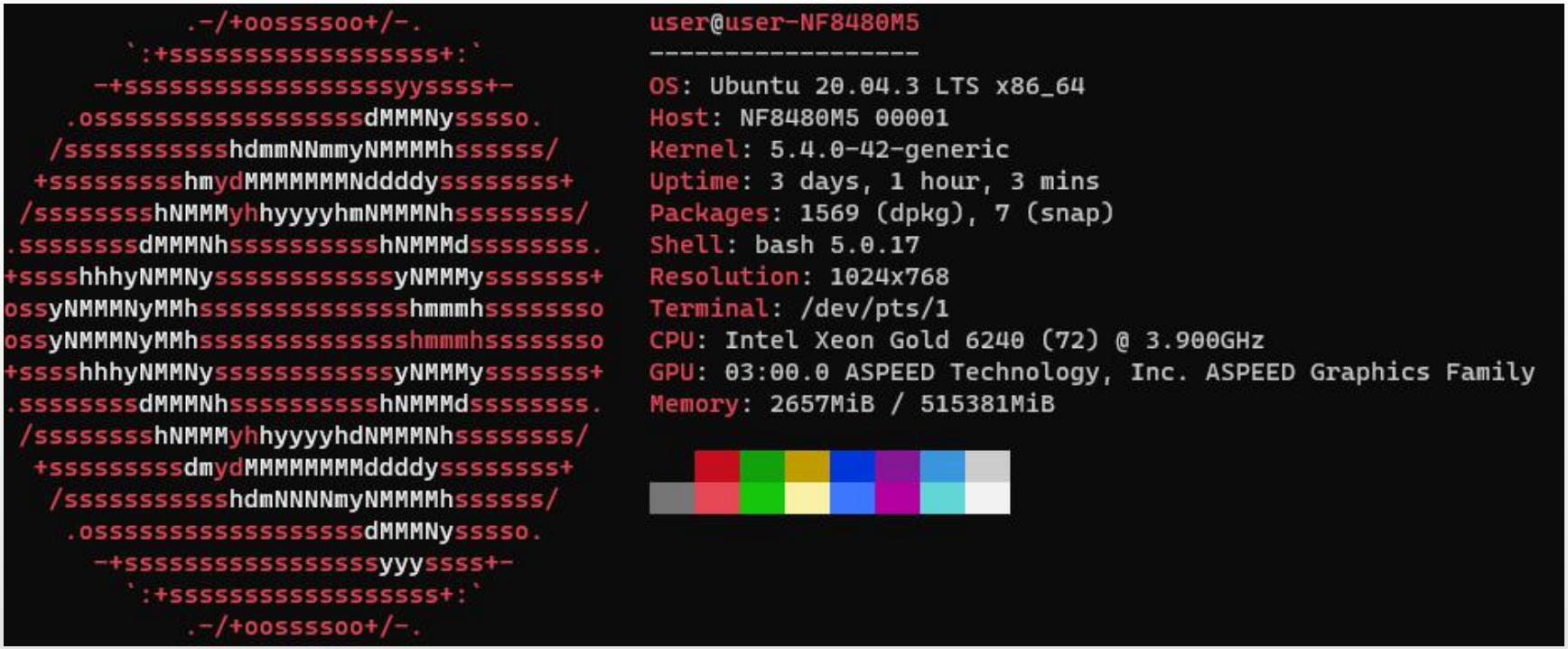
下一步计划：

完成一个简单的二维材料模拟的GAN网络

大约接下来两周完成：

- 用kmc程序跑出足够多的二维数据；
- 搭建一个建议的gan网络，初步实现训练过程。

组内服务器：系统信息


user@user-NF8480M5
OS: Ubuntu 20.04.3 LTS x86_64
Host: NF8480M5 00001
Kernel: 5.4.0-42-generic
Uptime: 3 days, 1 hour, 3 mins
Packages: 1569 (dpkg), 7 (snap)
Shell: bash 5.0.17
Resolution: 1024x768
Terminal: /dev/pts/1
CPU: Intel Xeon Gold 6240 (72) @ 3.900GHz
GPU: 03:00.0 ASPEED Technology, Inc. ASPEED Graphics Family
Memory: 2657MiB / 515381MiB

组内服务器：处理器信息

```
Architecture:                    x86_64
CPU op-mode(s):                  32-bit, 64-bit
Byte Order:                      Little Endian
Address sizes:                   46 bits physical, 48 bits virtual
CPU(s):                          72
On-line CPU(s) list:             0-71
Thread(s) per core:              2
Core(s) per socket:              18
Socket(s):                       2
NUMA node(s):                    2
Vendor ID:                       GenuineIntel
CPU family:                      6
Model:                           85
Model name:                      Intel(R) Xeon(R) Gold 6240 CPU @ 2.60GHz
Stepping:                        7
CPU MHz:                         1000.998
CPU max MHz:                     3900.0000
CPU min MHz:                     1000.0000
BogoMIPS:                        5200.00
Virtualization:                  VT-x
L1d cache:                       1.1 MiB
L1i cache:                       1.1 MiB
L2 cache:                        36 MiB
L3 cache:                        49.5 MiB
NUMA node0 CPU(s):               0-17,36-53
NUMA node1 CPU(s):               18-35,54-71
Vulnerability Itlb multihit:     KVM: Mitigation: Split huge pages
Vulnerability L1tf:              Not affected
Vulnerability Mds:               Not affected
Vulnerability Meltdown:          Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1:        Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2:        Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbds:             Not affected
Vulnerability Tsx async abort:   Mitigation; TSX disabled
Flags:                           fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxs
                                 r sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_
                                 good nopl xtopology nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est
                                  tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer
                                  aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3 invpcid_singl
                                 e intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad
                                  fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid cqm mpx rdt_a avx512f avx512dq rdseed adx
                                 smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc
                                 cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp
                                 _pkg_req pku ospke avx512_vnni md_clear flush_l1d arch_capabilities
```

存储信息：

```
xulei@user-NF8480M5:~$ free -m
               total        used        free      shared  buff/cache   available
Mem:          515381        2616      507195           6        5569      509736
Swap:           2047           0        2047
xulei@user-NF8480M5:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            252G     0  252G   0% /dev
tmpfs            51G  3.0M   51G   1% /run
/dev/sda2       879G  8.1G  826G   1% /
tmpfs           252G     0  252G   0% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
tmpfs           252G     0  252G   0% /sys/fs/cgroup
/dev/loop0       55M   55M     0 100% /snap/core18/1880
/dev/loop1      256M  256M     0 100% /snap/gnome-3-34-1804/36
/dev/loop3       30M   30M     0 100% /snap/snapd/8542
/dev/loop2       63M   63M     0 100% /snap/gtk-common-themes/1506
/dev/loop4       50M   50M     0 100% /snap/snap-store/467
/dev/sda1       511M  5.3M  506M   2% /boot/efi
/dev/sdb1        22T   24K   21T   1% /data
tmpfs            51G   20K   51G   1% /run/user/1000
/dev/loop5       56M   56M     0 100% /snap/core18/2128
/dev/loop6       33M   33M     0 100% /snap/snapd/13170
/dev/loop7      128K  128K     0 100% /snap/bare/5
/dev/loop8       51M   51M     0 100% /snap/snap-store/547
/dev/loop9       66M   66M     0 100% /snap/gtk-common-themes/1519
/dev/loop10     219M  219M     0 100% /snap/gnome-3-34-1804/72
tmpfs            51G  8.0K   51G   1% /run/user/1002
```

编译器信息：

```
user@user-NF8480M5:~$ gcc -v
Using built-in specs.
COLLECT_GCC=gcc
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/9/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none:hsa
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu 9.3.0-17ubuntu1~20.04' --with-bugurl=file:///usr/share/doc/gcc-9/README.Bugs --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --prefix=/usr --with-gcc-major-version-only --program-suffix=-9 --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix --libdir=/usr/lib --enable-nls --enable-clocale=gnu --enable-libstdcxx-debug --enable-libstdcxx-time=yes --with-default-libstdcxx-abi=new --enable-gnu-unique-object --disable-vtable-verify --enable-plugin --enable-default-pie --with-system-zlib --with-target-system-zlib=auto --enable-objc-gc=auto --enable-multiarch --disable-werror --with-arch-32=i686 --with-abi=m64 --with-multilib-list=m32,m64,mx32 --enable-multilib --with-tune=generic --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --without-cuda-driver --enable-checking=release --build=x86_64-linux-gnu --host=x86_64-linux-gnu --target=x86_64-linux-gnu
Thread model: posix
gcc version 9.3.0 (Ubuntu 9.3.0-17ubuntu1~20.04)
user@user-NF8480M5:~$ mpichversion
MPICH Version:          3.3.2
MPICH Release date:     Tue Nov 12 21:23:16 CST 2019
MPICH Device:           ch3:nemesis
MPICH configure:        --build=x86_64-linux-gnu --prefix=/usr --includedir=${prefix}/include --mandir=${prefix}/share/man --infodir=${prefix}/share/info --sysconfdir=/etc --localstatedir=/var --disable-silent-rules --libdir=${prefix}/lib/x86_64-linux-gnu --runstatedir=/run --disable-maintainer-mode --disable-dependency-tracking --with-libfabric --enable-shared --prefix=/usr --enable-fortran=all --disable-rpath --disable-wrapper-rpath --sysconfdir=/etc/mpich --libdir=/usr/lib/x86_64-linux-gnu --includedir=/usr/include/x86_64-linux-gnu/mpich --docdir=/usr/share/doc/mpich CPPFLAGS= CFLAGS= CXXFLAGS= FFLAGS= FCFLAGS= BASH_SHELL=/bin/bash
MPICH CC:       gcc  -g -O2 -fdebug-prefix-map=/build/mpich-VeuB8Z/mpich-3.3.2=. -fstack-protector-strong -Wformat -Werror=format-security  -O2
MPICH CXX:      g++  -g -O2 -fdebug-prefix-map=/build/mpich-VeuB8Z/mpich-3.3.2=. -fstack-protector-strong -Wformat -Werror=format-security -O2
MPICH F77:      f77  -g -O2 -fdebug-prefix-map=/build/mpich-VeuB8Z/mpich-3.3.2=. -fstack-protector-strong -O2
MPICH FC:       f95  -g -O2 -fdebug-prefix-map=/build/mpich-VeuB8Z/mpich-3.3.2=. -fstack-protector-strong -cpp -O2
MPICH Custom Information:
```

账号：

- 内网：10.208.128.243
- 外网：159.226.41.103
- port：4404

- user:姓名全拼.eg: xulei
- password：姓名全拼+007！eg:xulei007!