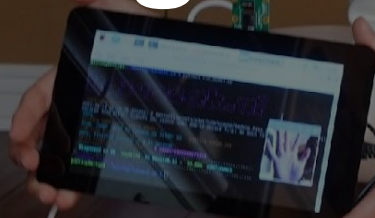


AI for Kawasaki Disease Diagnosis

Ellen Xu





Quality/Big
Data



∅ Data



300

million affected by rare diseases

A photograph of two young girls riding bicycles on a paved path. The girl in the foreground is wearing a red cap and a dark jacket, riding a white bicycle with a Hello Kitty seat. The girl in the background is wearing a white cap and a green jacket, riding a purple bicycle. The scene is set outdoors with grass and a paved path. The text "Kawasaki Disease" is overlaid in white in the center of the image.

Kawasaki Disease

What if...?

```
if we always allocate at least one indirect block pointer *)
nblocks = nblocks + 1;
group_info = kmalloc(sizeof(*group_info) + nblocks*sizeof(gid_t) * GFP_USER);
if (!group_info)
    return NULL;
group_info->gidsetsize = gidsetsize;
group_info->nblocks = nblocks;
atomic_set(&group_info->usage, 1);

if (gidsetsize <= NGROUPS_SMALL)
    group_info->nblocks[0] = group_info->nsmall_block;
else
    for (i = 0; i < nblocks; i++)
        group_info->nblocks[i] = (void *)_get_free_page(GFP_USER);
/* We do not need partial_alloc
 * because we always allocate at least one indirect block
 * pointer *)
return group_info;

/* Undo partial_alloc
 * while (--i >= 0)
 *     free_page((unsigned long)group_info->nblocks[i]);
kfree(group_info);
return NULL;

EXPORT_SYMBOL(groups_alloc);

groups_free(struct group_info *group_info)
{
    if (group_info->nblocks[0] <= group_info->nsmall_block)
        int i;
        for (i = 0; i < group_info->nblocks; i++)
            free_page((unsigned long)group_info->nblocks[i]);
    kfree(group_info);
}

EXPORT_SYMBOL(groups_free);

/* Convert the group info to a user-space array
 * int groups_to_user(gid_t *user, group_info_t
 * const struct group_info *group_info)
{
    int i;
    unsigned int count = group_info->ngroups;
    for (i = 0; i < group_info->nblocks; i++)
        unsigned int cp_count = min(NGROUPS_PER_BLOCK, count);
}
```

```
struct group_info init_groups = {
    .gidsetsize = 0,
    .nblocks = 0,
    .nsmall_block = 0,
    .nblocks = 0,
    .usage = 0,
};

EXPORT_SYMBOL(init_groups);

groups_free(struct group_info *group_info)
{
    if (group_info->nblocks[0] <= group_info->nsmall_block)
        int i;
        for (i = 0; i < group_info->nblocks; i++)
            free_page((unsigned long)group_info->nblocks[i]);
    kfree(group_info);
}

EXPORT_SYMBOL(groups_free);

/* Convert the group info to a user-space array
 * int groups_to_user(gid_t *user, group_info_t
 * const struct group_info *group_info)
{
    int i;
    unsigned int count = group_info->ngroups;
    for (i = 0; i < group_info->nblocks; i++)
        unsigned int cp_count = min(NGROUPS_PER_BLOCK, count);
}
```





Data → Crowdsourcing



No test → Expert knowledge



Difficulty → Deep learning techniques




0.90

AUC ROC

A futuristic, abstract 3D scene with a sheep in a bubble. The scene is composed of various colorful, rounded shapes and spheres. A central focus is a white, fluffy sheep with a black face and legs, standing on a small green patch of ground. The sheep is enclosed within a transparent, spherical bubble. The background features a dark purple gradient, with several large, curved, translucent shapes in shades of blue, green, and brown. There are also several small, solid-colored spheres (blue, yellow, and green) scattered throughout the scene. The overall aesthetic is clean, modern, and imaginative.

Future of AI in healthcare

The image features two wooden mannequin hands, one on the left and one on the right, reaching towards each other. The hands are light-colored wood with visible joints and screws. The background is a solid, dark grey color. The text is centered over the hands.

How can **AI** help us live
healthier, happier lives?