XPilot-AI
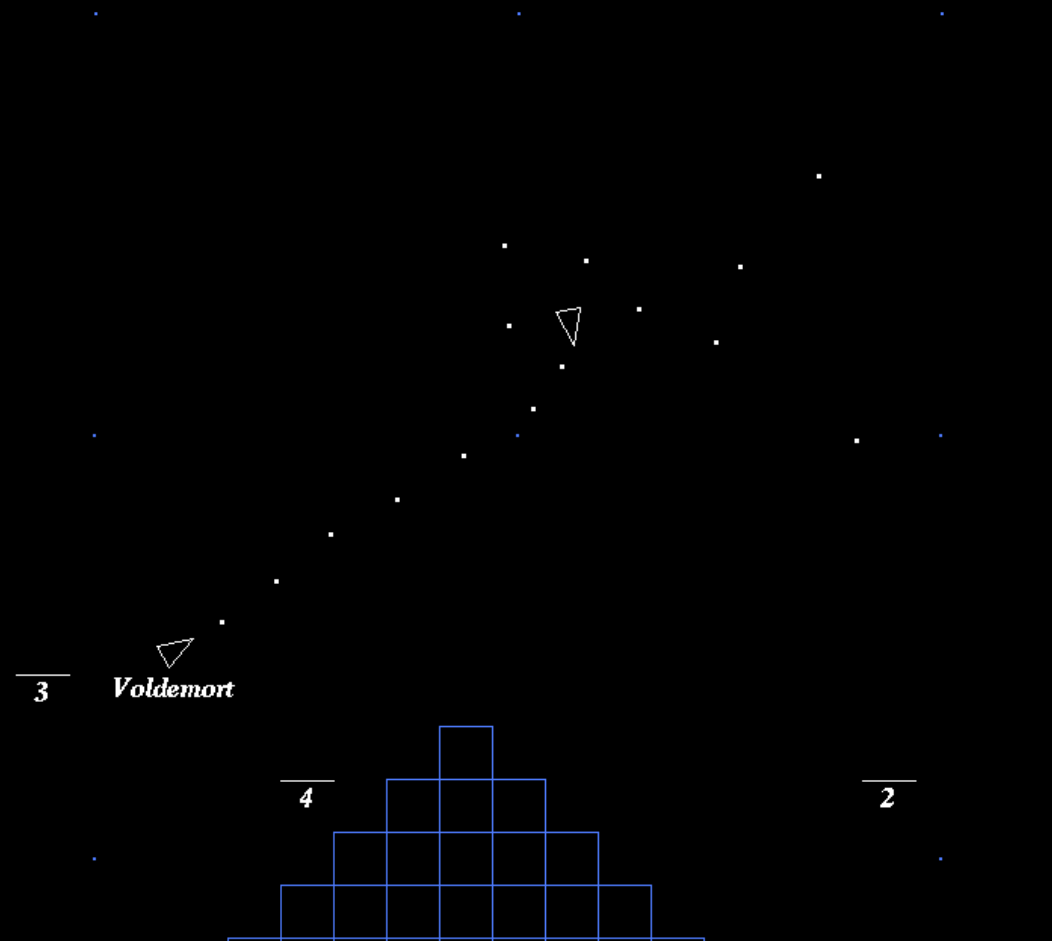
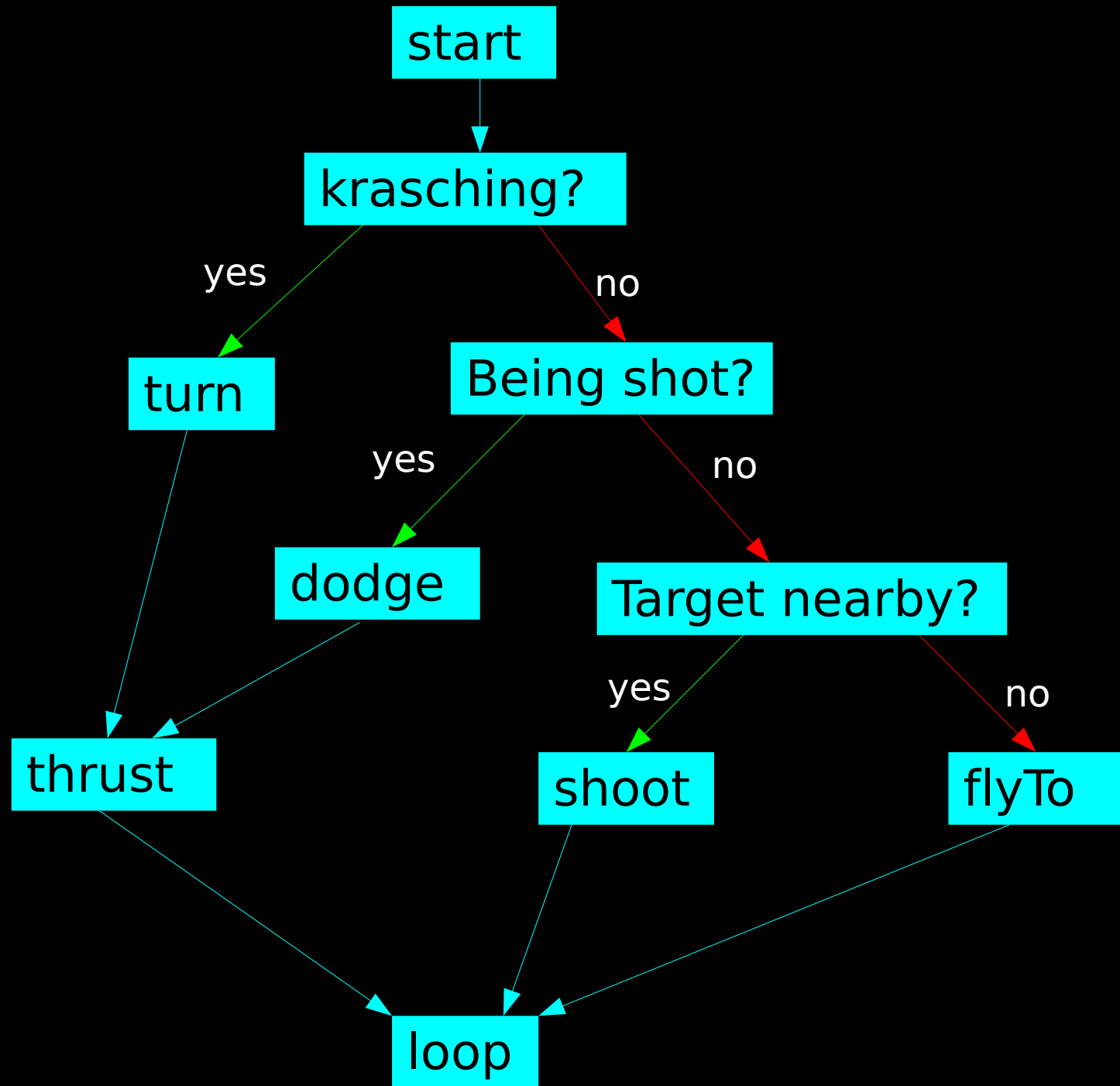John Litborn, Magnus Karlsson, Christoffer Karlborg

Goal

An AI that can:

- scan its surroundings and react accordingly

- act agressively or defensively based on need

- identify enemy ships, track them down and shoot them

Features

- Identifies enemy ship(s)
  - Flies to it
  - Shoots it
- Dodges incoming shots
- Avoids obstacles

Control flow

```
                    start
                      |
                      v
                  krasching?
                 /          \
             yes/            \no
               /              \
            turn          Being shot?
             |            /          \
             |        yes/            \no
             |          /              \
             |       dodge        Target nearby?
             |        /           /          \
             |       /        yes/            \no
             |      /          /              \
          thrust            shoot             flyTo
             \                 \              /
              \                 \            /
               \                 \          /
                \                 \        /
                 ------------- loop -------
```

start → krasching?

krasching? — yes → turn

krasching? — no → Being shot?

Being shot? — yes → dodge

Being shot? — no → Target nearby?

Target nearby? — yes → shoot

Target nearby? — no → flyTo

turn → thrust

dodge → thrust

thrust → loop

shoot → loop

flyTo → loop

Uses

- As a practice partner
- For cheating!
- Entertainment