HOW TO BECOME AN AUTONOMOUS DRIVING ENGINEER

Automated Driving Forum Gothenburg

AGENDA

INTRODUCTION

Improve your skills with open source projects

Interview with an Expert

Free Talk

INTRODUCTION

- About Automated Driving Forum Gothenburg
- About me: Feng Liu
- About today's topic
- Call for future topics
- Call for feedback and help
- Thanks to GACSS GKK and Everyone Test

哥德堡華文學院
GÖTEBORGS KINESISKA KULTURSKOLA

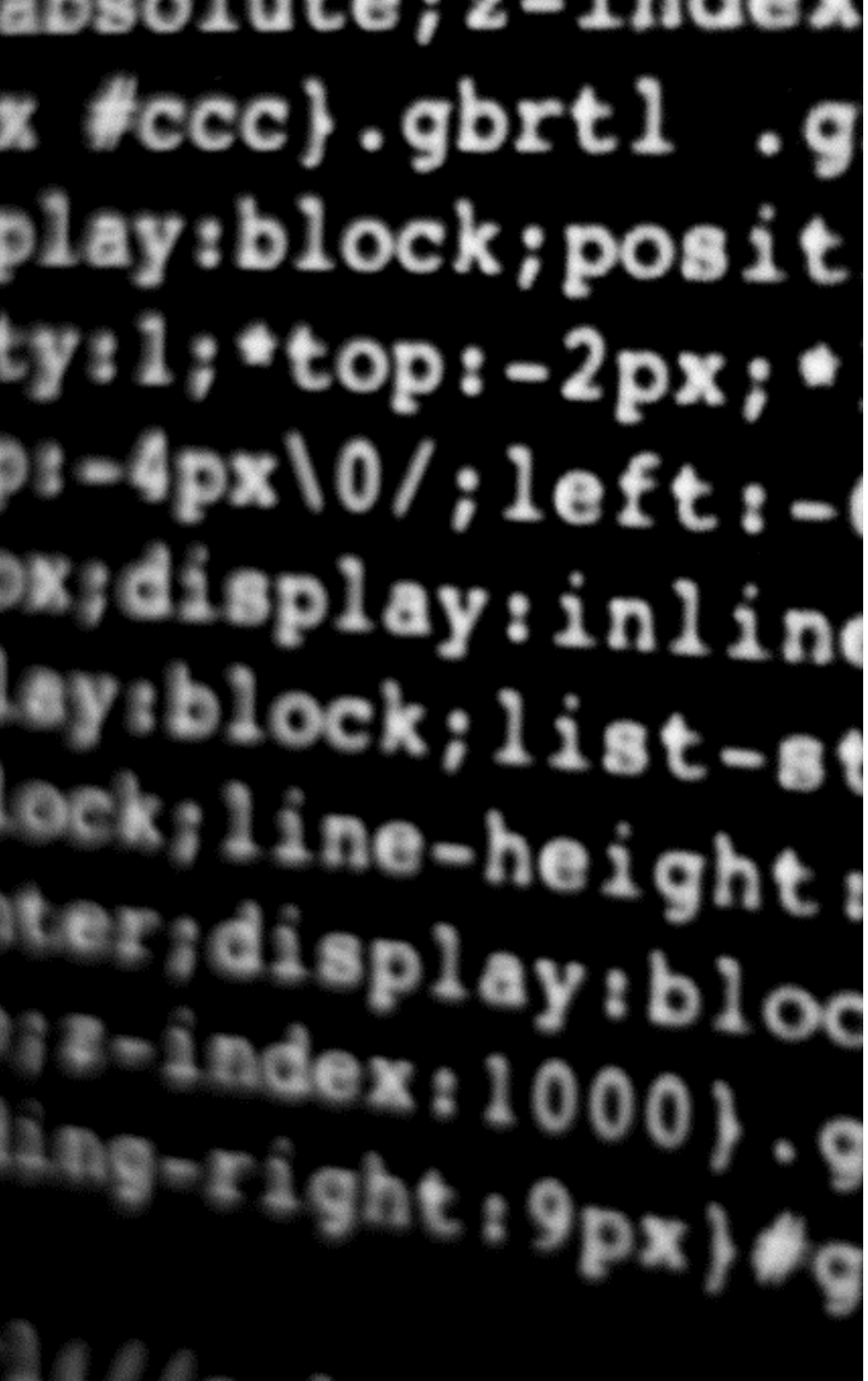
EVERYONE TEST

IMPROVE YOUR SKILLS WITH

OPEN SOURCE PROJECTS

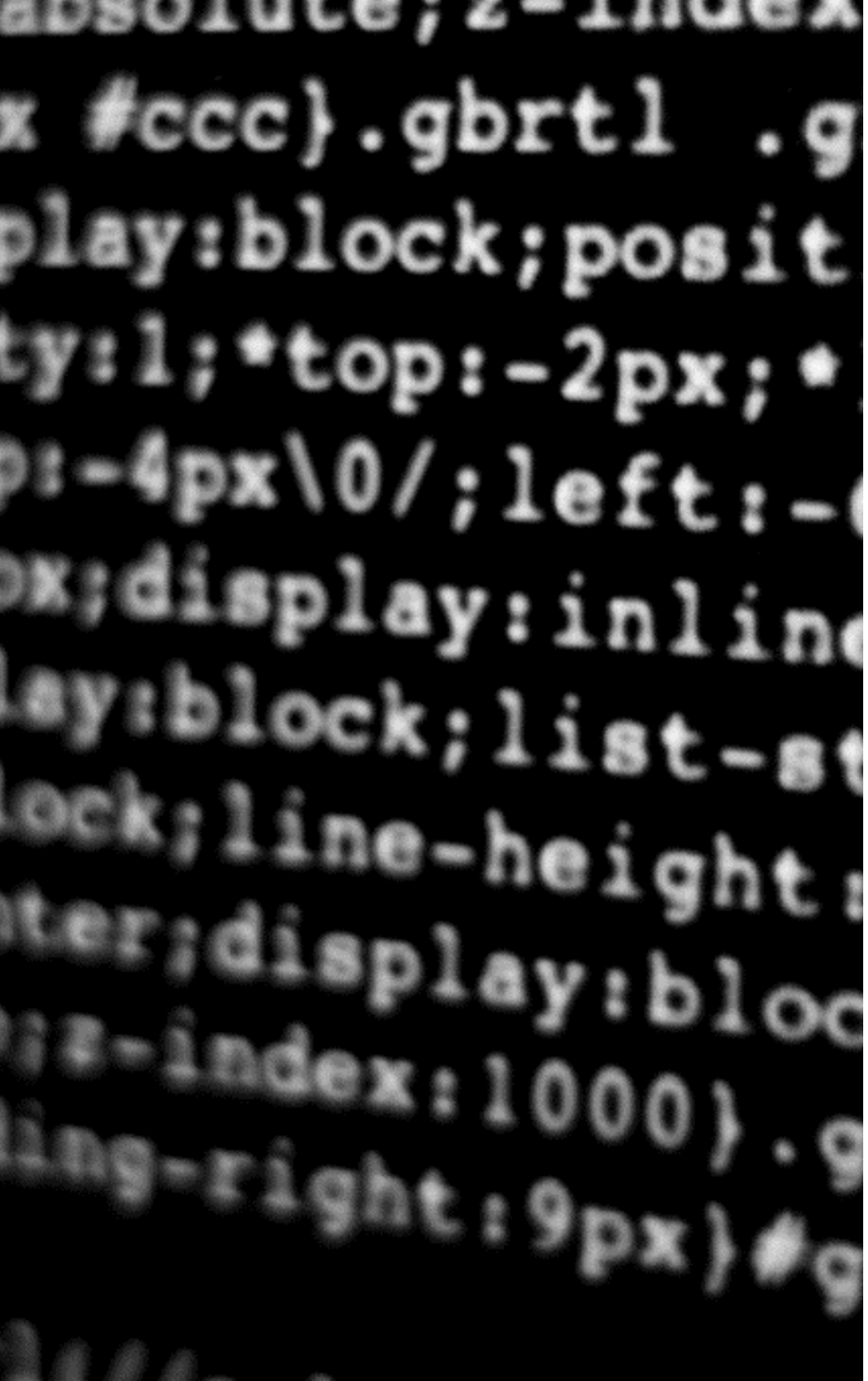
THE BACKGROUND DOESN'T MATTER

- Some of the work in Autonomous Driving Vehicle Development:
  - Sensors
  - Computing Hardware
  - Perception Algorithms
  - Planning Algorithms
  - Real-time OS
  - Ground Truth System
  - Data Management System
  - Simulation and Testing
  - Simulator Development
  - CI/CD system
  - …



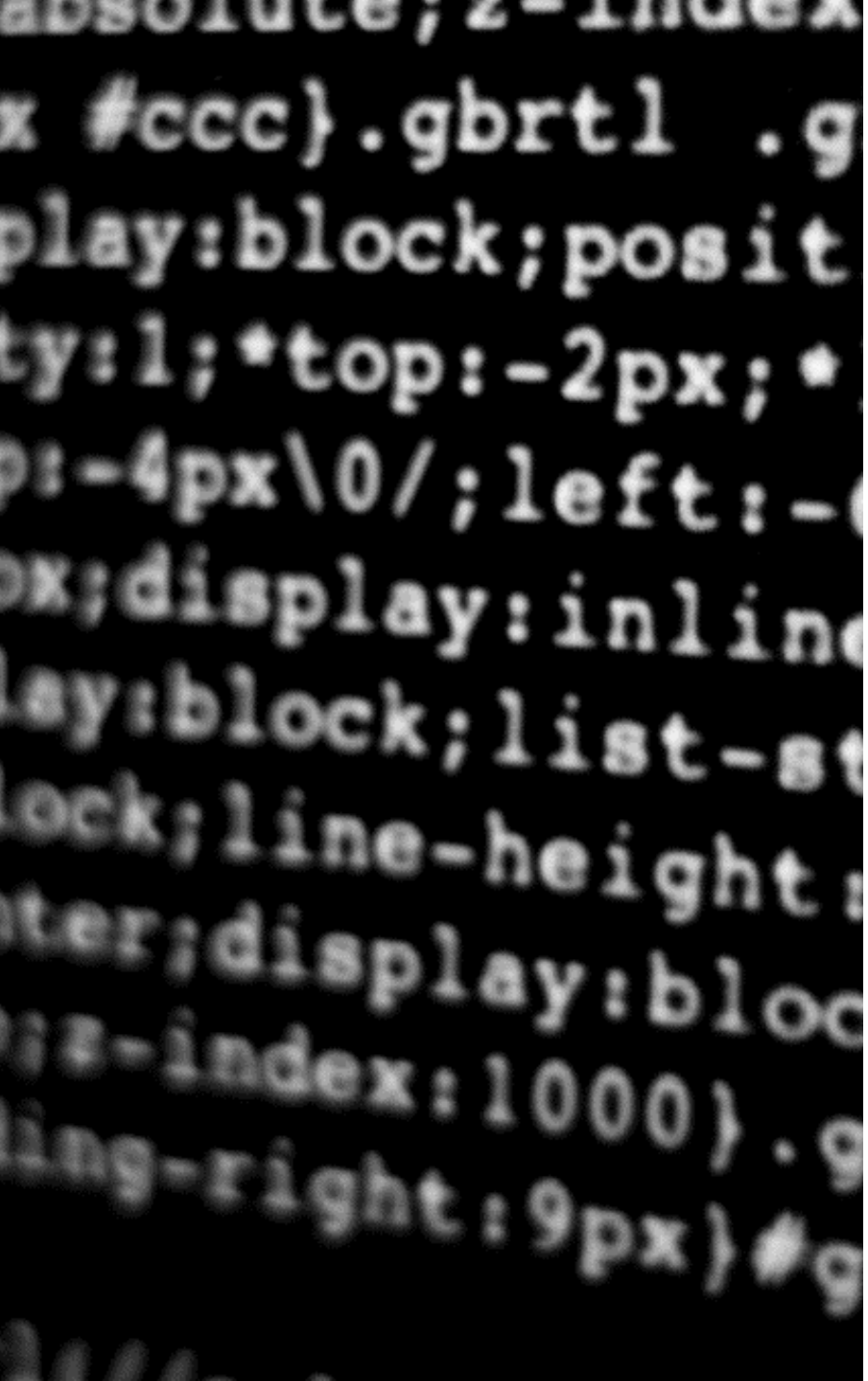
USE OPEN SOURCE PROJECTS TO IMPROVE YOUR HANS-ON SKILLS

- To try, to play with
- Contribute to open source projects
- Create your own open source projects



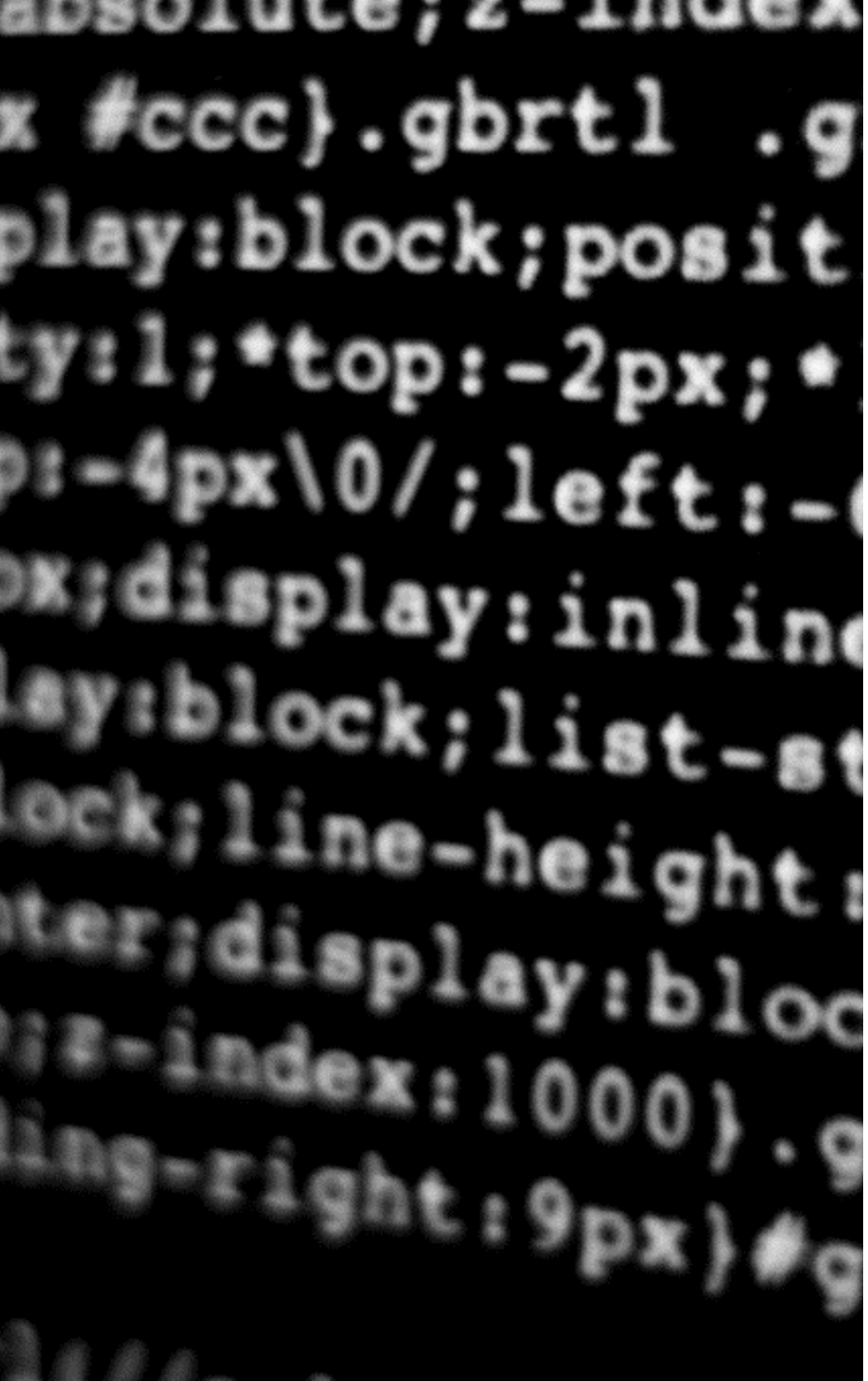
EXAMPLE OF OPEN SOURCE PROJECTS

- Automated Model Car: donkeycar.com



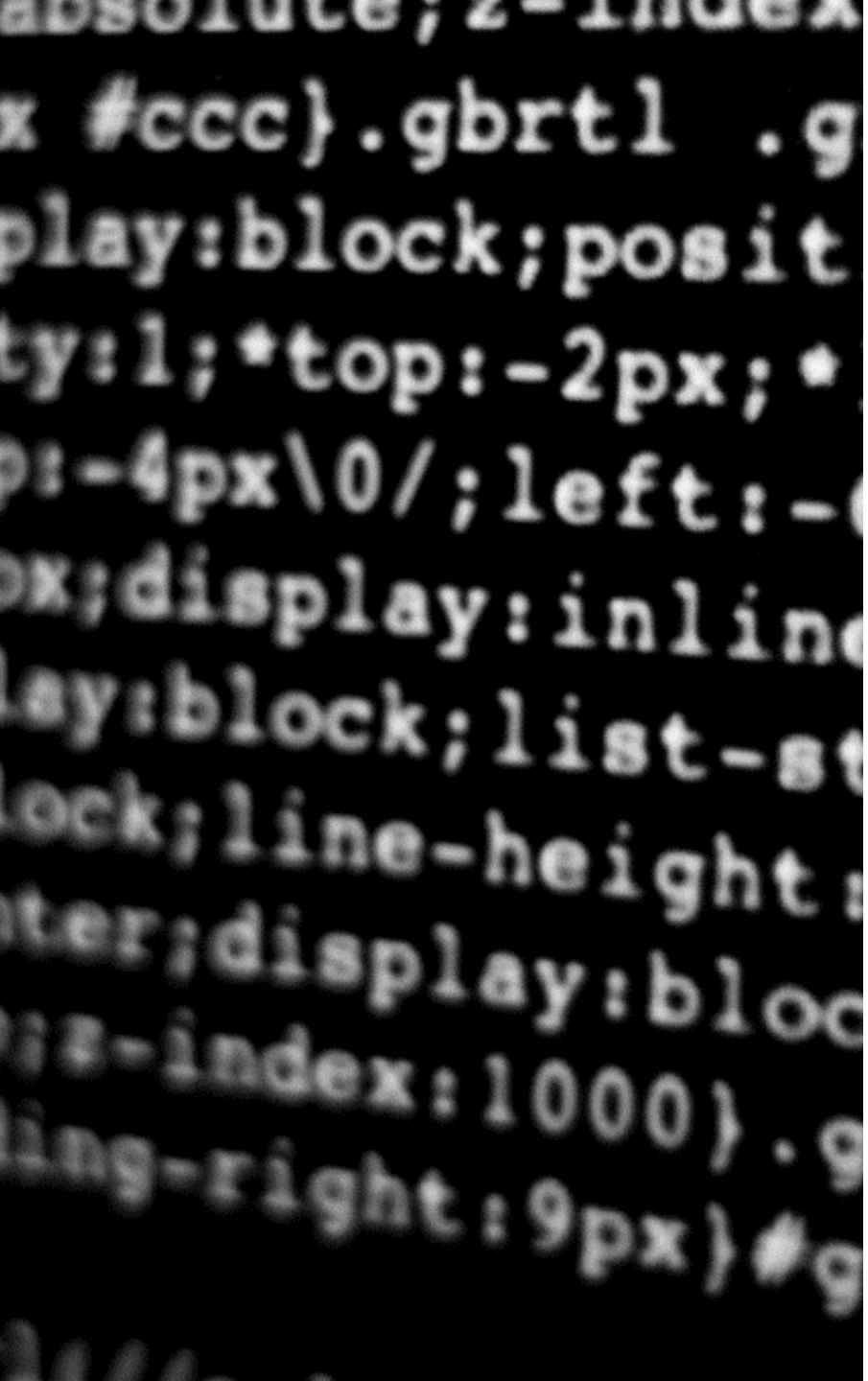
EXAMPLE OF OPEN SOURCE PROJECTS

- Full Stack Autonomous Driving Software:
- Stanford self-driving car (https://github.com/ManavA/stanford_self_driving_car_code)
- Baidu Apollo (https://www.apollo.auto/)
- Autoware (https://autoware.org/)
- UniAD (https://github.com/OpenDriveLab/UniAD)



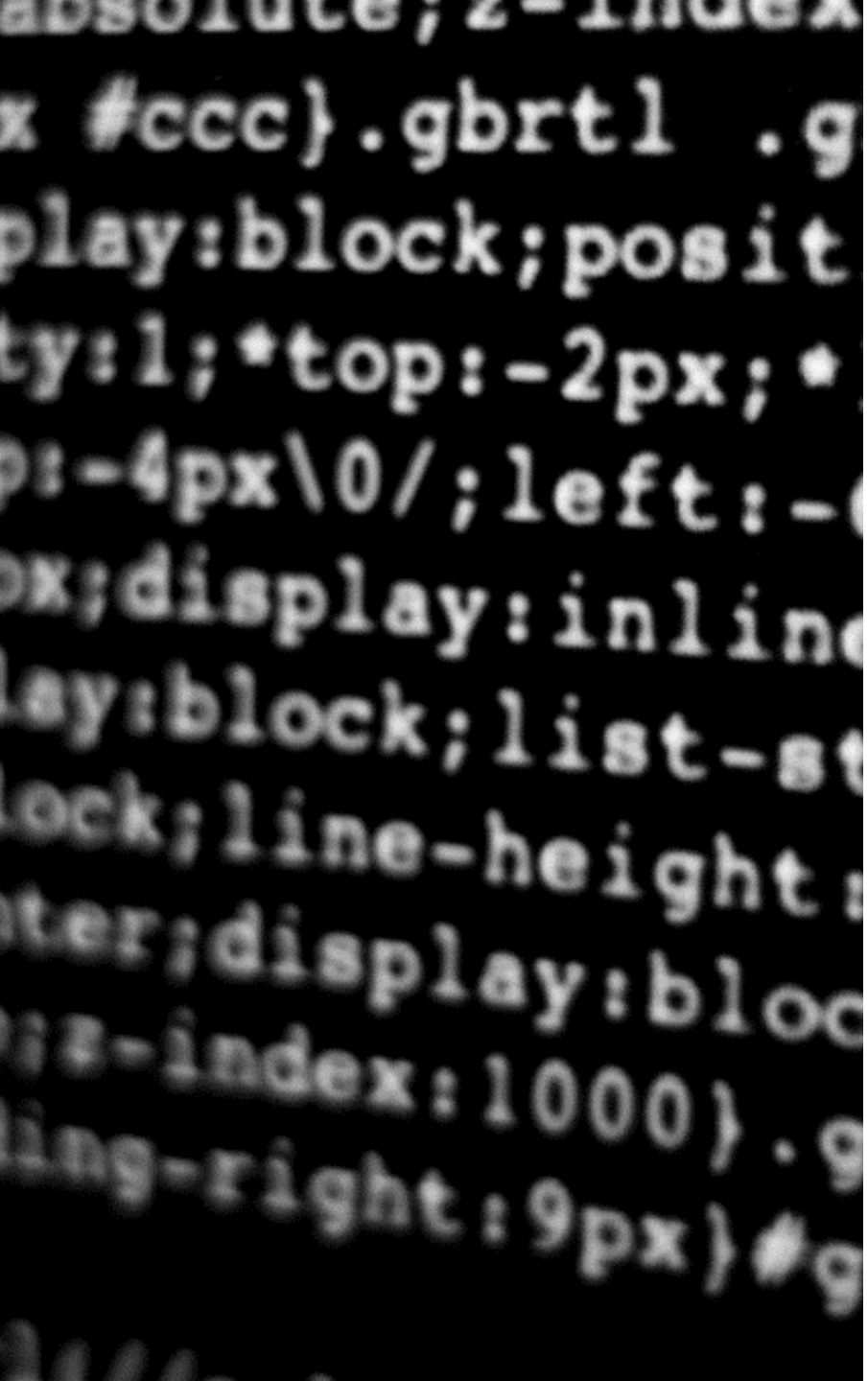
EXAMPLE OF OPEN SOURCE PROJECTS

- Simulators:
- Carla (https://carla.org/)
- 51sim (https://simone.51sim.com/ and https://gitee.com/OpenSimOne)
- Gazebo (https://gazebosim.org/home)



EXAMPLE OF OPEN SOURCE PROJECTS

- Simulation Scenarios and OpenSCENARIO format:
- OpenSCENARIO (https://www.asam.net/standards/detail/openscenario/v200/)
- ALKS Scenarios (https://github.com/asam-oss/OSC-ALKS-scenarios)
- esmini (https://github.com/esmini/esmini)
- pyoscx scenario generator (https://github.com/pyoscx/scenariogeneration)



EXAMPLE OF OPEN SOURCE PROJECTS

- AD Datasets:
- ZOD (Zenseact)
- ONCE (Huawei)
- nuScenes (One of the most popular dataset)
- A list of all datasets (https://ad-datasets.com/)

INTERVIEW WITH AN EXPERT

BUILDING YOUR CV

THANK YOU

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Automated Driving Forum Gothenburg (Meetup)