INTERNSHIP AT CASRA – 3D AUTOMATED THREAT ITEM PLACEMENT
ABOUT US

CASRA (Center for Adaptive Security Research and Application) is an interdisciplinary team of scientists, security experts, and software engineers with a common purpose and mission. We specialize in researching human-machine interaction and creating products based on those findings to help improve security in aviation and other areas worldwide.

CASRA has a strong record of accomplishment in national and international research projects in the area of psychology, including several EU projects. We publish our research results at conferences as well as in scientific journals and magazines.

IDEA AND EXPECTED OUTCOME

New computed tomography (CT) technology is being introduced at airports worldwide and CASRA wants to offer an image library to train staff who operates these machines.

To streamline the image production process, we artificially place threat items into recordings of real luggage. The scope of the internship is to automate this placement process. This includes the following tasks:

- Algorithmically determine available space in CT images for placement of threat items
- Rigid body simulation to make the item take a realistic position
- Ensure item positions in the luggage and not in luggage tray
- Find quantitative metrics to determine the quality
- Improve performance

WHAT WE EXPECT

- BSc in computer science, electrical engineering, or similar
- Experience in signal processing and computer vision
- Programming skills in C# beneficial

WHAT WE OFFER

You will be integrated into a SCRUM team and work closely with supportive professional software engineers, learning how to develop enterprise software.

GENERAL INFO

Min. duration:
3 to 6 months

Salary:
CHF 3’000 to 3’500 per month (full time)

Contact details:
jobs@casra.ch
Phone +41 (0)43 336 01 01

Thurgauerstrasse 39,
8050 Zurich, Switzerland
www.casra.ch