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. When a CT image is recorded, metallic artefacts are created that are aligned with the recording direction. Once we place the items with an arbitrary rotation into the bag, the artefacts of the item and the bag no longer align. The scope of the internship is to improve the process of merging an item and a bag into one CT image. This includes the following tasks:

• Removal of artefacts in CT image of item
• Recreation of artefacts in merged CT image

WHAT WE EXPECT

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

WHAT WE OFFER

You will be integrated into a SCRUM team and work closely with supportive professional software engineers, learning in the process 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:
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