IAESTE BELGIUM

WORK OFFER

Ref. No. BE-2021-009UGE

Employer Information

Employer: Ghent University - IDLab research group
Information Technology

Technologiepark-Zwijnaarde 126

9052 Zwijnaarde
Belgium

Website:

Location of placement: Zwijnaarde
Nearest airport: Brussels Airport
Working hours per week: 40.0
Working hours per day: 8.0

Number of employees: 250
Business or products: Research

Student Required

General Discipline: COMPUTER AND INFORMATION SCIENCES

Field of Study: Artificial Intelligence.;Information Technology.; Computer Software and Media Applications, Other.; Computer Systems Networking and Telecommunications.

Completed years of study: 3

Student status requirements: Student status during the entire internship is mandatory. Please include a Certificate of Enrolment with nomination.

Language required: English Excellent (C1, C2)

Required Knowledge and Experiences:

The candidate has good analytical skills, is well-organized and is able to plan and execute tasks

Python: good understanding of OOPs concepts, data structures and numpy/matplotlib
C++: ability to write, build and compile projects with attention to memory management
HTML/CSS/JS: knowledge of web-based frameworks is an advantage

GitHub: at least one demonstrable sample GitHub project
LaTeX: ability to write reports using Overleaf
MS Office: basic knowledge of Excel, Word and PowerPoint

Other requirements:

The candidate has a Bachelor's degree in computer science engineering, informatics or electrical engineering, or is close to obtaining one
The candidate is available for an online interview and a basic test on Python
If trainee does not have EEA or Swiss nationality, stay is limited to 90 days.

Work Offered

Adaptive video streaming for virtual reality

As virtual reality devices and applications are becoming more prominent in our everyday lives, solutions to support high-quality and bandwidth-intensive 360° video streaming are being researched. The most promising approach is to not only divide the video into temporal segments, as for typical HTTP-based adaptive streaming, but also to spatially divide the video into multiple tiles. As a user only looks at a limited subset of these tiles (i.e., the viewport) at any given moment, there is no need to send all other tiles of the current segment in the highest quality as well.

Reducing the bandwidth strains on the network can thus be achieved by intelligently predicting the viewport based on the user's behavior (e.g., current movement speed, acceleration) and/or the video content (e.g., points of interest, recognized objects). In addition, network enhancements (e.g., HTTP/2 push, packet prioritization) can be brought into play to accelerate the transport of the most important tiles.

The internship will start from an existing set of algorithmic solutions and proof-of-concept implementations, developed previously in our research group. The focus of the study will be on one or more of the following aspects: algorithm design, proof-of-concept demonstration, testbed evaluation. The trainee will collaborate in a small team of researchers with a long-term experience in multimedia delivery solutions.

Number of weeks offered: 6 - 12
Within the months: 07-JUN-2021 - 24-SEP-2021
Or within: -
Company closed within: -
Latest possible start date: 16-AUG-2021

Working environment: Research and development
Gross pay: 240 EUR / Week
Deduction to be expected: 0
Payment method / time of first payment: Bank Transfer /

Accomodation

Canteen at work: No
Expected type of accommodation: Student dormitory
Accommodation will be arranged by: IAESTE LC Ghent

Estimated cost of lodging: 100 EUR / Week
Estimated cost of living incl. lodging: 200 EUR / Week

Additional Information

Nomination Information

Deadline for nomination: 15-MAR-2021

Date: 11-JAN-2021 *On behalf of receiving country:* Annelies Vermeir