Ivachev Fedor 費杰

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Nationality: Russian

Executive Summary

- Currently located in Beijing and open to relocation
- Experienced in **Computer Vision** and **Computer Graphics** with a focus on **Big Data Intelligence**
- Proficient in Python and C++, with experience in Java, C#, JavaScript and SQL
- Tools, Libraries: Git, OpenCV, NumPy, TensorFlow, pandas, Graphics Profilers, Unity, IoT automation platforms

Work Experience

Tsinghua University, Beijing (Teaching Assistant, 2021/01 - 2022/01; PhD Research Assistant 2021/09 - Present)

- Assisted lead instructor in facilitating Human-Computer Interaction course
- Helped and taught both international and local students
- Developed educational tutorials and provided assistance to students for group projects
- Contributed to the development of lab projects and the publication of research papers

Huawei Technologies Co., Ltd, Moscow (Software Engineer, 2019/02 - 2019/08)

- Worked on low-level Graphic Profiling Tools using **C++**
- Retrieved information from integrated GPU counters, which helped to gain more precise timings for draw calls
- These tools were used by Graphic optimization and QA teams
- Coordinated with developers across Russia and China

Samsung RC, Ltd, Moscow (Intern, Programmer, 2018/06 - 2018/09)

- Developed Computer vision algorithms in 3D Avatar team using **C++** and **Python**
- Worked on OpenCV source code for removing camera distortion and implemented face physical landmark detection algorithm
- Our solution was later included into the OS

Education

- Master's in Computer Science (2019/09-2021/06), GPA 3.9, Tsinghua University, China
- Bachelor's in Computer Science (2015/09-2019/06), Lomonosov Moscow State University, Russia

Projects + Technology stack

- **Unity C# + IoT platforms -** NUIX-Studio APP - A platform to test AIoT environments in Virtual Reality. Based on Microsoft MRTK, OpenHAB and HomeAssistant (version 1), it lets users to extend real-world IoT devices with additional functionality in the Virtual Reality. Vesrion 2 is based on Oculus SDK and includes a user interface, which allows prototyping IoT interactions in Virtual Reality without any programming knowledge.
- **OpenAI API + Android Studio + Java + Azure + Huawei Mobile Services -** AI real-world agent - GPT-4-based agent analyzes multimodal information from AR glasses sensors to build a human portrait and handle everyday conversations, while automatically captioning unseen data.
- **Blender** - Special effects for TikTok - I created 10 advanced AR effects for TikTok (Douyin), which have been used for more than 3 million times.

Qualifications

- Huawei Certification: HCIA-**AI** (2020)
- Certificate of 2-week Practice in **Web Apps** Development, Samsung RC, Ltd, Moscow (2017)
- National and First-level Olympiads of Mathematics (2015, 2012), National Olympiad of Competitive Programming (2014)

Publications

- Modification of Algorithm for inverting matrices with elements from ring of scalar differential operators. CMC MSU MAKS PRESS 2019: 88 (in Russian)
- ClarifAI: Context-Aware Multimodal Ontological Annotation and Abnormality Detection Through Human-AI Collaboration. UIST 2024 (CCF A top-level conference; under submission)
- SightTalk: Real-time Unseen Visual Data Captioning Through Human-AI Conversation. UIST 2024 (CCF A top-level conference; under submission)

Misc. Information

- Languages: English (C1, IELTS 7.5 in 2018), Chinese (B1), Russian (native)
- Holder of a Hong Kong ID card, allowing right to abode without any visa restrictions
- Availability: immediately