Benjamin Kahl

VR Developer



About me

I am a specialist in computer graphics and virtual reality with a strong passion for cognitive and behavioral studies. My mission is to leverage virtual environments to enhance the ecological validity of research and advance the field of psychology.

personal

Benjamin Kahl nationality: Germany / Finland 1994

Areas of specialization

Computer Graphics • Virtual Reality • Cognitive and Behavioral Studies • Game Development

Skills

10+ years of experience with C++, C# and Java

Wide, overarching game development skillset, including programming, 3D modelling, texturing, photoshop, shaders etc.

5+ years of experience with Unity, Unreal Engine, OpenGL and DirectX

Practical experience with SQL, JavaScript, HTML and CSS.

- 🛑 benjamin.kahl.fi
- 🕠 github.com/Helliaca
- 📊 in/benjamin-kahl
- 💙 benjamin@kahl.fi

WORK EXPERIENCE

12/2022-present

VR Developer

FULL-TIME · Max-Planck Institute for Human Development Responsible for advising researchers on feasibility and developing VR-based cognitive studies from inception to completion. Proficient in integrating cutting-edge technologies such as Wavefield-Synthesis setups, full-body 3D scanners, passthrough VR, hand tracking, etc., into cognitive studies.



11/2021-12/2022

Research Assistant

PART-TIME · SCIOI Cluster / MPIB 9

Research assistant at SCIoI Cluster of Excellence. Specialization in building cognitive studies based on 3D immersive environments and ecological validity using computer graphics. Emphasis on studies focusing on collective intelligence and modeling foraging behavior.



10/2019-11/2021

VR Developer

Part-Time \cdot Max-Planck Institute for Human Development (ARC) $\ref{eq:partial}$



Development and implementation of cognitive studies using Java, Python (OpenSesame), C#, and Unity. Specialization in immersive 3D environments, game engines, and VR. Co-authored research papers, assisted in data analysis with Python scripts and visibility simulations using Unity, and built a software framework to facilitate VR cognitive studies development.

3/2017-6/2017

Full-Stack Developer

Internship · Futurice 💡

Development of internal web tools using Django and Python, frontend design with HTML, CSS, and JavaScript, back-end integration with PostgreSQL databases, and participation in projects involving microcontrollers.



LANGUAGES

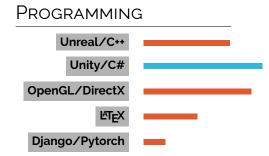


Mother Tongue

English C1 (IELTS)







EDUCATION

9/2018-11/2022

Computer Science

MASTER OF SCIENCE · Freie Unversität Berlin 💡



Specialization in practical computer science with emphasis on computer graphics and computational geometry. Thesis on computer graphics with the title Hardware Acceleration of Progressive Refinement Radiosity using Nvidia RTX. Thesis mark: 1.0. Overall average mark: 1.3

9/2014-3/2019 **Computer Science**

BACHELOR OF SCIENCE · Freie Unversität Berlin 💡



Bachelor's thesis focused on computer graphics with the title Real-Time Global Illumination Using OpenGL and Voxel Cone Tracing. Thesis mark: 1.0. Overall average mark: 2.3

9/2013-9/2014 Chemistry

BACHELOR STUDIES · Freie Unversität Berlin 💡



Non-organic chemistry lab traineeship. Courses on scientific presentations and mathematics. Average mark: 3.0

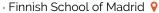
2001-2013 **High School Graduation**

ABITUR / GYMNASIUM · Deutsche Schule Madrid ♀



Language classes in German, Spanish (native speaker level), English, French, Finnish. Abitur examination in German, Spanish, Mathematics and Chemistry. Overall average mark: 1.9

1999-2007 **Weekend Schooling**





Classes on Finnish language, culutre and history.

PUBLICATIONS

2023 Collective incentives reduce over-exploitation of social information in unconstrained human groups

NATURE COMMUNICATIONS · Deffner, D., Mezey, D., Kahl, B., Schakowski, A., Romanczuk, P., Wu, C. M., et al.

10.1038/s41467-024-47010-3

2023 Visual-spatial dynamics drive adaptive social learning in immersive environments

PREPRINT · Wu, C. M., Deffner, D., Kahl, B., Meder, B., Ho, M. H., & Kurvers, R. H. J. M.

10.1101/2023.06.28.546887

2022 Hardware Acceleration of Progressive Refinement Radiosity using Nvidia RTX

Master's Thesis · Kahl, B

2303.14831

2021 Specialization and selective social attention establishes the balance between in-

dividual and social learning

PREPRINT · Wu, C. M., Ho, M. K., Kahl, B., Leuker, C., Meder, B., & Kurvers, R. H. J. M.

10.1101/2021.02.03.429553

2019 Real-Time Global Illumination Using OpenGL And Voxel Cone Tracing

BACHELOR'S THESIS · Kahl, B

2104.00618



