

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 

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 • Max-Planck Institute for Human Development (ARC) 

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, front-end design with HTML, CSS, and JavaScript, back-end integration with PostgreSQL databases, and participation in projects involving microcontrollers.



LANGUAGES



German

Mother Tongue



English C1 (IELTS)

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Spanish

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Finnish

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PROGRAMMING

Unreal/C++



Unity/C#



OpenGL/DirectX













LaTeX



Django/Pytorch



EDUCATION

9/2018–11/2022	Computer Science MASTER OF SCIENCE · Freie Universität Berlin  Specialization in practical computer science with emphasis on computer graphics and computational geometry. Thesis on computer graphics with the title <i>Hardware Acceleration of Progressive Refinement Radiosity using Nvidia RTX</i> . Thesis mark: 1.0. Overall average mark: 1.3	
9/2014–3/2019	Computer Science BACHELOR OF SCIENCE · Freie Universität Berlin  Bachelor's thesis focused on computer graphics with the title <i>Real-Time Global Illumination Using OpenGL and Voxel Cone Tracing</i> . Thesis mark: 1.0. Overall average mark: 2.3	
9/2013–9/2014	Chemistry BACHELOR STUDIES · Freie Universität 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 · Finnish School of Madrid  Classes on Finnish language, culture 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 individual 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