About Organisation

Name of Company:	Sony Global (Japan)
Date of Establishment:	1946-05-07
Number of Employees:	113,000
Social Media Page Link:	https://www.sony.com/en/
Website:	https://www.sony.com/en/
Type of Organization:	MNC (Foreign Origin)
Location of Head office:	Tokyo, Japan
Nature of Business:	Other (core_engineering,it_software,data_science,finance_consulting,cyber_security,media,manufa

Internship Profile

Job Title: INF4_ Engineer - XR System

Job Description:

[Technology Field]
Computer Graphics,System Software

[Position Summary]
We, the XR System Technology Development Department, are a division of the Technology Development Laboratories located in Tokyo, Japan. Our mission is to spearhead the development of XR (Extended Reality) core technologies and pave the way for launching new XR business ventures.

At our department, we focus on three key areas that serve as the foundation for XR technology advancements:

a) Developing System Technology for Downsizing and Lightening HMDs and Naked-Eye 3D Displays:
We are dedicated to pushing the boundaries of XR hardware by developing cutting-edge system technologies that enable the downsizing and lightening of Head-Mounted Displays (HMDs) and naked-eye 3D displays. Our goal is to enhance user comfort and mobility while delivering immersive XR experiences.

b) Developing Sensing/Rendering/Simulation

Technologies for Seamlessly Presenting Mixed-Reality Worlds:
Creating seamless mixed-reality experiences is a critical aspect of XR technology. To achieve this, we focus on the development of advanced sensing, rendering, and simulation technologies. By leveraging state-of-the-art techniques, we aim to bridge the gap between the physical and virtual worlds, ensuring a smooth and natural integration of the two.

c) Developing XR (AR/VR) Content Creation Technology Assisted by AI:
The creation of compelling XR content is crucial for captivating user experiences. To achieve this, we harness the power of AI technology in the development of XR content creation tools. By leveraging AI algorithms, we empower creators to generate immersive and interactive XR content, pushing the boundaries of creativity and engagement.

As an XR System Engineer, you will play a crucial role in advancing the field of human-computer interaction by contributing to the development of XR core technologies. This position requires a comprehensive engineering skill set, encompassing both hardware and software domains. On the hardware side, you will work on mechanical, electronic, and optical designs. On the software side, your expertise will span across various areas, including computer vision, real-time 3D graphics, physics and motion planning used in game engines, parallel algorithms applicable to GPU or FPGA, video/audio codecs, real-time operating systems, wired and wireless networking, machine learning, and more.

Your expertise in a specific technology area, coupled with your curiosity for various related technologies, will be essential in driving our innovation forward. We encourage you to propose and develop new research themes that combine your expertise with Sony's unique hardware, such as CMOS image sensors.

-Working environment:
Main offices of Sony Corporation are located at Shinagawa, Osaki and Minatomirai in Japan.
Please see the video below to gain some insight into the workplace at our company.
https://www.youtube.com/watch?v=oHYviwUv21o
Although the offices are in Japan, you can work in an English-speaking environment.
If you are curious about what it's like to work as an international employee at Sony in Japan, please see the webpage below.
https://note.com/sonycorporation/n/n7a022b3f19c8

Join us in shaping the future of XR technology and redefining the way we interact with computers. Together, we can push the boundaries of what is possible in the world of XR. If you are passionate about XR technology, have a strong engineering background, and thrive in a collaborative and innovative environment, we invite you to apply for this exciting opportunity as an XR System Engineer.

[Responsibilities]
When you join our division, you will have the opportunity to take on one or two of the following responsibilities:
■ Develop vision processing algorithms and implement them in real-time systems, including tasks such as depth estimation, surface reconstruction, light estimation, and eye tracking.
■ Work on real-time rendering techniques, such as novel view synthesis and path tracing, to create immersive visual experiences.
■ Conduct simulations, including fluid dynamics, to enhance the realism of XR environments.
■ Optimize algorithms for specialized hardware platforms, such as GPUs, FPGAs, and ASICs, to achieve high-performance XR systems.
■ Design electronic circuits and program FPGAs while developing device drivers to ensure seamless integration of hardware and software components.
■ Contribute to the development of AI-assisted creative support features that will be integrated into game engines or digital content creation (DCC) tools.
■ Explore the development of digital twin construction services on cloud platforms.

In addition, we encourage you to embrace the following practices:
■ Acquire and master the most advanced AR/VR technologies to become a world-class engineer in the field.
■ Progress towards a leadership position or become a core member of the development team responsible for delivering our original technologies as products or services in collaboration with other departments in R&D or business units.
■Collaborate with global Sony Group companies to create business value as an AR/VR engineer across various industries, including electronics, gaming, entertainment, medical, finance, and more.

By joining our team, you will have the opportunity to make a significant impact in the field of AR/VR. We encourage you to embrace continuous learning, leadership development, and global collaboration as you grow your career as an AR/VR engineer.

[Required qualifications]
We expect the applicant to have at least some of the following skills or experiences:
■ Experience developing computer vision algorithms (experience in both Python and C++ is preferred).
■ Experience developing realtime 3DCG rendering software using low-level API (e.g. DirectX/Vulkan/OpenGL).
■ Expertise in optimization, parallel/distributed processing, and acceleration, including system software and hardware (GPU/FPGA).
■ Experience creating 3D content using game engines (UE/Unity) and DCC tools (e.g. Blender, Houdini, etc.).
■ Experience developing plugins for these tools, or utilizing AI to generate content, is preferred.
■ Experience on dev/ops of cloud services.

[Preferred qualifications]
■ Advanced degree in Computer Science, especially in Artificial Intelligence, Machine Learning, or a related technical field.
■ Experience deveping and implementing streaming protocols over wired and wireless networks.
■ Experience developing AI-assisted content generation or editing features integrated into plugins for game engines or DCC tools.

[Product, Service]
XR device, Game(PlayStation), Entertainment(Music, Movie) etc.

[Development Environment]
・PC: x86/x64 Windows compatible PC
・OS: Windows and Linux
・Game Engine: Unreal Engine, Unity

Minimum No. of Hires:	1
Expected No. of Hires:	3
Location(s)/Place of Posting/Online:	Tokyo, Japan
Skillset:	Please see the details in Job Description
Students with backlog eligible:	No

Selection Process

Resume Shortlist:	Yes
Mode of Selection:	Virtual
Resume shortlisting before test?:	No
Test:	Yes
Mode of Test:	Online
Test duration (minutes):	60
Aptitude/Psycometric:	No
Technical:	Yes
Group Discussion:	No
Other modes:	Coding Test (Python/C++) and Essay (Essay format will be distributed through the OCS office. Please follow the instruction given by them.)
Personal Interview:	Yes
Technical Round:	Yes
HR Round:	No

Medical Test:	No

Eligible Academic Programs

Diversity Recruiting:	No
Eligible Years:	Graduating in 2026 (Pre-Final Year Students) - B.Tech / Dual / Master's
Eligible Departments:	B.Tech in Biochemical Engineering & Biotechnology, B.Tech in Chemical Engineering, B.Tech in Civil Engineering, B.Tech in Computer Science & Engineering, B.Tech in Electrical Engineering, B.Tech in Electrical Engineering (Power and Automation), B.Tech in Energy Engineering, B.Tech in Engineering Physics, B.Tech in Engineering and Computational Mechanics, B.Tech in Materials Engineering, B.Tech in Mathematics & Computing, B.Tech in Mechanical Engineering, B.Tech in Production & Industrial Engineering, B.Tech in Textile Engineering, B.Tech and M.Tech in Biochemical Engg & Biotechnology, B.Tech and M.Tech in Chemical Engineering, B.Tech and M.Tech in Computer Science & Engineering, B.Tech and M.Tech in Mathematics & Computing, M.Sc in Chemistry, M.Sc in Cognitive Science, M.Sc in Economics, M.Sc in Mathematics, M.Sc in Physics, Bachelor of Design, Master of Design in Industrial Design, Ph.D. in IITD-NYCU Joint Degree Programme

Stipend Details

Stipend (per month) (In JPY Per Month):	276,451 JPY Per Month
Accommodation:	Single rental apartment/hotel with Wifi, Visa, flight, commuting fee, international travel insurance all provided by Sony.
Any other perks/ benefits/ components:	1.Stipend The stipend which stated in the compensation package section is not fixed amount as your stipend will be calculated based on the working day. [Gross Stipend] Bachelor: 12,566/ working day (Gross) Master: 13,823/ working day (Gross) Example: If there are 22 working days in a month, net stipend in a month is Bachelor : JPY 276,451 / month (Gross) Master : JPY304,097 / month (Gross) [Net Stipend] Bachelor: JPY 10,000/ working day (Net) Master: JPY 11,000/ working day (Net) Example: If there are 22 working days in a month, net stipend in a month is Bachelor : JPY 220,000 / month (Net) Master : JPY 242,000 / month (Net)

2.Other Benefits/Support
Single rental apartment/hotel with Wifi, Visa, flight, commuting fee, international travel insurance all provided by Sony.

Provision of PPO based on performance?	Yes
Tentative CTC for PPO select:	TBD JPY Per Annum