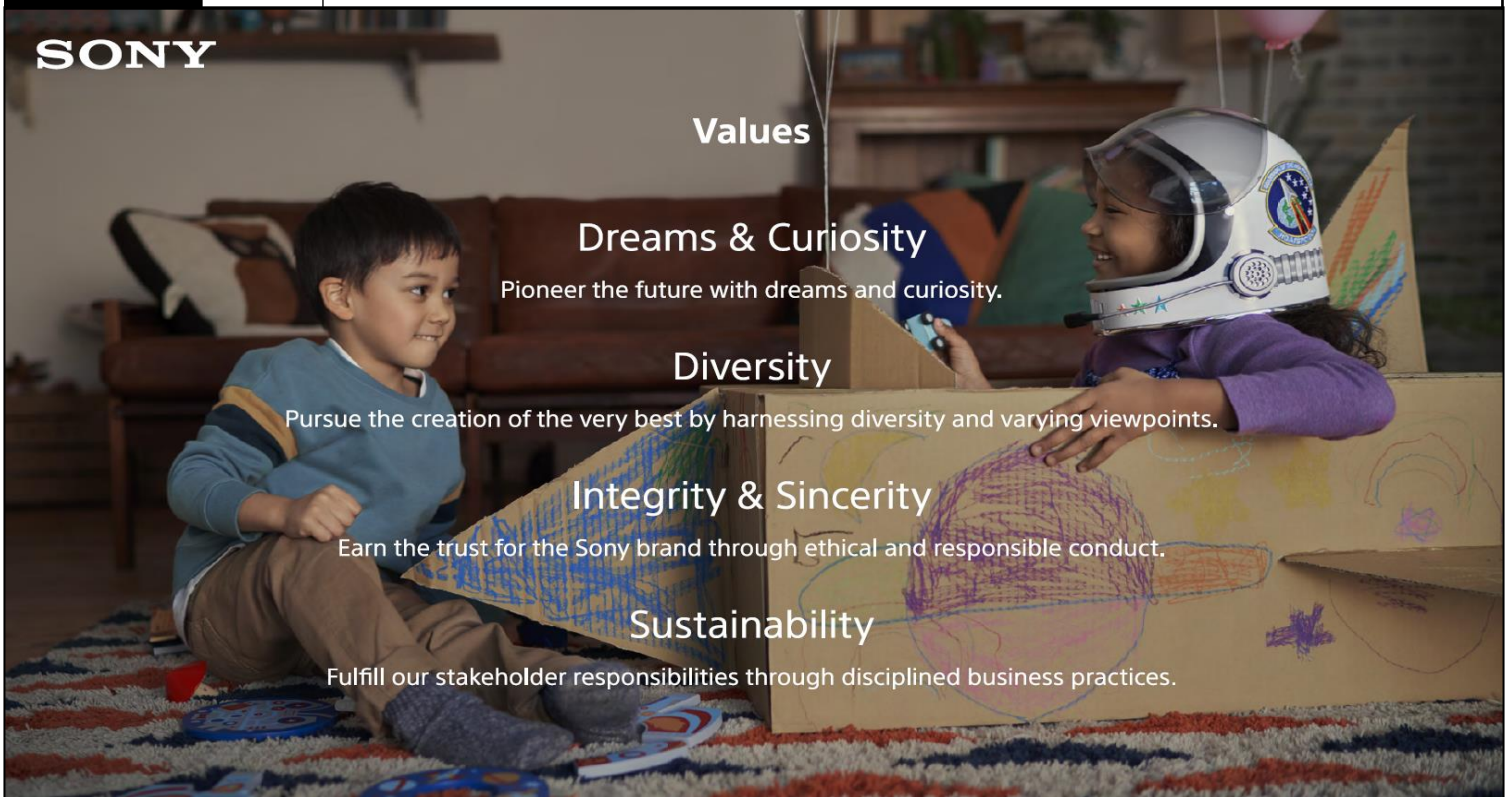
SONY

Sony Global Internship 2022

Job Description	Please see the details of the positions from Page 2. (TBD. All available positions will be finalized by July)
Working Location	Tokyo and/or Kanagawa, Japan
Internship Period	In principle 8-10 weeks between May - September 2022 *Possible to discuss the internship schedule individually
Allowance and Benefit	[Allowance] Bachelor: JPY 7,000 Master: JPY 8,000 PhD: JPY 9,000/Working day (paid in NET amount) [Benefit] Single rental apartment/hotel with Wifi, Visa, flight, commuting fee, international travel insurance all provided by Sony
Selection Process	1.Submit your CV 2.Complete Essay and/or Online Coding Test(depending on position) 3.Interview* (*Shortlisted candidates will be invited to the interview in October)
How to apply	Step 1: Pre-register through the link below Step 2: Application form for each position will be ready in August. You will receive email once they are ready. Please apply to the position you are interested in and submit application.

Pre-registration
https://www.sony.com/en/SonyInfo/Careers/japan or scan→

Positions	1	Computational Photography, Next Generation Image Sensing Technology Researcher (Job description in P.3)
	2	Human interaction engineer (Job description in P.3)
	3	Visual Recognition Computation Systems and Architecture, Research Engineer (Job description in P.3)
	4	Machine Learning & Robot Control, Software Engineer (Job description in P.3)
	5	Machine Learning & Computer Vision, Software Engineer (Job description in P.4)
	6	Deep Learning, Researcher/Research Engineer/Software Engineer (Job description in P.4)
	7	AI Engineer/ML Engineer of intelligent information processing technology field (Job description in P.4)
	8	Algorithm development on 3D computer vision area. (Job description in P.4)
	9	Research Engineer, Audio Signal Processing (Job description in P.5)
	10	Robotics, Engineer / Researcher (Job description in P.5)
	11	R&D engineer of Music, Acoustics, Speech, and Language technology field (Job description in P.5)



No.	Job Title	Responsibilities	Product, Service
1	Computational Photography, Next Generation Image Sensing Technology Researcher	Develop new image processing algorithm based on computational photography technology or other research level technology to enhance functionality or image/video quality of SONY products such as digital still camera, camcorder, TV, PC, and gaming devices. - Investigation of possible technical options to achieve functionality enhancement or image/video quality enhancement. - Conducting research and image/video processing algorithm development to achieve above purpose communicating with engineers closely - Providing algorithm description document, reference code in the specified programming language, and regular research reports	Consumer/professional digital imaging products such as digital still camera, camcorder, digital single lens reflex camera, surveillance camera, camera module in PC and mobile phone and gaming platform. Image sensors to be provided to many companies including apple, Samsung, google etc.
2	Human interaction engineer	Research and development on Human Interaction Technology, including user interface, applications, innovative user experiences in XR, Natural UI, Cyber-Physical world, and Autonomous Systems. -develop technologies of XR interactions based on leading-edge input/output devices, algorithms such as machine learning, graphics/audio technology, cognitive science, and psychology, and validate user naturalness, intuition, ease of use, and experience value. -develop systems of Cyber-Physical interaction world based on human sensing and audio/graphic technology, data analysis, machine learning. -develop prototypes indicate future concepts of next-generation XR interaction, Cyber-Physical world.	Electronics, Game products. Game, music, pictures, financial services.
3	Visual Recognition Computation Systems and Architecture, Research Engineer	* Develop low latency / high bandwidth / high performance per watt computation system on edge computers. Also collaboratively work with related team that are responsible for wireless communications and cloud side computation. * Port Sony's in-house algorithms to build assets on Sony's internal hardware. * Design and propose software systems, based on required scenarios of future products and services based on Sony's technical assets -- and of course, help to realize them as PoCs or business units.	Robotics, Game(PlayStation), Entertainment
4	Machine Learning & Robot Control, Software Engineer	Algorithm research and development on robot control area. - Research of technological trends in the target robot control based on machine learning areas. - Survey of state-of-the-art papers, implementation/replication and evaluation of some of the techniques. - Improvement of the techniques. - Report the summary of the evaluation and improvement.	robot(aibo, drone, factory automation)

No.	Job Title	Responsibilities	Product, Service
5	Machine Learning & Computer Vision, Software Engineer	Algorithm research and development on image recognition area, mainly human, object and behavior recognition. - Research of technological trends in the target image recognition areas. - Survey of state-of-the-art papers, implementation/replication and evaluation of some of the techniques. - Improvement of the techniques. - Report the summary of the evaluation and improvement.	robot(aibo, drone), smart devices (Xperia, smart speaker, smart glass, HMD), digital imaging (alpha-still camera, handy cam), automobile, medical imaging
6	Deep Learning, Researcher/Research Engineer/Software Engineer	Topics: - Deep Learning General: Large-scale training & transfer learning, Generative models, AI-ethics technologies (XAI&Fairness), Architectures & training algorithms for specific data formats such as graph & cross-modal. - Deep Learning Software Libraries: Development of opensource deep learning framework nnabla (low-level implementation, API design, training reproduction of recent models, etc.) - Creation AI core: CG and deep learning for games, movies etc. Expected outcomes: - Paper submission to top conferences - Publishing opensource software libraries/packages - Deep Learning models & tools (software libraries/packages or feasibility reports) for specific business applications at Sony	Electronics (On-device image/audio/sensor processing), Entertainment contents (Content management, Video/audio content enhancement), Games (Play Station), AI SaaS (Neural Network Console, Prediction One) etc.
7	AI Engineer/ML Engineer of intelligent information processing technology field	Research and development of advanced application technologies and information processing technologies in our target fields (Computer Vision, Natural Language Processing, Sound, etc.) Entertainment contents: - Open-domain dialogue generation - Vision-based commentary generation - Language-based procedural CG generation Remote communication: - Non-verbal context understanding - CG Avatar / Motion generation Financial services: - Multi-turn dialogue understanding - Real-world data analysis Healthcare services: - Respiratory / Heart sound analysis - Behavioral change interventions/systems/theory in healthcare	Entertainment Contents, PlayStation, Robots, Financial Services, Healthcare Services, Remote Communication, and Consumer Electronics.
8	Algorithm development on 3D computer vision area.	・Algorithm development of 3D computer vision area. ・Application development and software implementation. ・Reproduction of the latest academic papers. ・Collect and label development datasets ・Improvement of experimental equipment	Image sensor related products such as camera, smartphones, AR/VR, automotive and robot.

No.	Job Title	Responsibilities	Product, Service
9	Research Engineer, Audio Signal Processing	Sony's current mission is "Fill the world with emotion, through the power of creativity and technology". As R&D division exploring sound and acoustic research, we believe it is necessary to develop new sound technologies for entertainment in addition to the consumer audio products we have contributed to. To this end, we are considering strengthening machine learning and acoustic simulation, especially as an approach to technology, in addition to conventional signal processing technology. We are recruiting people who meet this objective. Specifically, there is a need for accurate and real-time simulation technology for Spatial audio. A wide range of subjects are covered, including estimation of HRTF (Head Related Transfer Function) required for virtual sound image localization, estimation of sound behavior in a room by wave propagation, and vibration simulation of loudspeaker and microphone mechanism. And while this has traditionally been done in modeling, it's also possible to get new efficiencies by working on the latest methods using machine learning. During the internship period, we expect that interns will tackle the development of novel methods based on state-of-the-art research papers.	VR/Game sound solution, Sound production solution for entertainment industry, Digital health solution using sound/vibration and Consumer/B2B audio products
10	Robotics, Engineer / Researcher	- Research engineer to develop algorithms regarding robotics, such as novel controller, motion control, motion/path/task/view planning and optimization problem, using machine learning - Survey, Development includes a construction of theory, integration into the real robot system to test or verification under simulation You will conduct a short term research including survey, planning, design, implementation and experiment using real system or simulation. During internship, you will have regular report and discussion with team members and final presentation will be arranged in last of your internship. Research topic related to a specific robot project will be decided through the discussion. We are looking for a person who can take the initiative in this work.	We developed entertainment robots such as AIBO and QRIO (Small size humanoid robot) in past and we are developing innovative technologies towards future robots in entertainment, mobile, manipulator and medical.
11	R&D engineer of Music, Acoustics, Speech, and Language technology field	・Research and development of elemental technology in our target fields (Music, Acoustics, Speech, and Language). ・Problem formulation, hypothesis verification, experiment, simulation, error analysis, data collection, technology research, etc. ・Experimental environment design, and implementation. ・Report on development plan, progress and status, and results. ・Close cooperation with members of the development team.	Game(PlayStation, Smart Phone Application, etc.), Movie/Music(Contents Creation Support), Video Analysis(Broadcast contents, Online Video, etc.), Robot(Aibo), Financial Service (Human Operation Support, Data Analysis), etc.