Training Notification Form, IIT Delhi

Company Overview

Name: Sony Japan

Website: https://www.sony.com/en/

Company Type: Information Technology

Description: Sony was established by founders who shared a dream and a strong will to enrich people's lives through the power of technology. From our founders' dreams and aspirations, Sony has grown over the years connecting more people with their dreams.
Sony runs a diverse portfolio of businesses from Electronic Business to Music, Movies, and Entertainment, all of which center around "People".
Talents from all over the world have been playing critical roles to make this happen, and will continue to in light of our journey ahead.
We are excited to continue trailblazing with a globally oriented mindset, and we ask that you consider joining us on our journey ahead!

Project Details

Designation: TNF 9 : Software Engineer (Parallel Programming and Machine Learning)

Type: Information Technology

Location: Tokyo, Japan

Project Details: [Technology Field]
Software Engineering

[Position Summary]
Our mission is to research and develop parallel computing technologies for real-time processing that will enable the innovation of Sony`s next-generation products in cloud gaming, automotive services, XR, and so forth.

Our research is focused on programming models, software frameworks, optimization for computer vision/AI algorithms, and system integration with product prototyping.
We develop software tools (e.g. compilers, libraries, frameworks), and runtimes. We also propose next-generation processor architectures to enable the efficient execution of environment recognition (including AI engines), involving many core processors, to be suitable for systems with power and memory limitations.

Here, see how the technology we developed has been implemented into Sony's real-time eye AF: https://www.sony.co.in/electronics/animal-eye-af

[Responsibilities]
During your internship, you will be involved in feasibility studies of existing technologies (e.g. programming models, software frameworks, compilers, AI model compactization technologies, etc.).

As such, you will:
- Develop advanced techniques for software optimization

- Develop working prototypes of integrated computing architectures to develop valuable propositions for Sony's business units.
- Apply best practices to analyze, design, develop, and deploy our proposed computing system technology concepts to target enterprises/entertainment platforms.
- Work closely with internal/external engineering partners and stakeholders to accelerate system development and address practical challenges in the field.

[Required qualifications]
- Research-Oriented Mindset: Strong commitment to conducting research and staying informed about the latest technological advancements, and passion for exploring cutting-edge technologies within fields such as computer science and machine learning.
- 5 years of experience with one or more general purpose programming languages including, but not limited to, Java, C/C++, and Python.
- 1 year of experience with high-performance computing projects utilizing GPGPU, OpenMP, OpenMPI, assembler, etc.
- Ability to speak and write in English fluently and idiomatically.
- Programming languages (C, C++, scripting languages, Python, shell scripting, etc.).
- Knowledge of various other languages/frameworks for parallel processing (e.g. Cuda, OpenCL, GLSL, HLSL, SSE, NEON).
- Strong understanding of computer architecture.
- Experience with embedded programming and developing micro-processor systems.
- Knowledge of computer operating systems (a strong understanding of general computer operating systems and hands-on experience with development in Linux and its internal components is required).
- Knowledge of parallel programing and optimizations.
- Experience with computer program optimization grounded in processor architectural knowledge (cache, memory, dedicated CPU/GPU/DSP instructions).

[Preferred qualifications]
- Ability to speak Japanese.
- Other domains of knowledge (any are a definite plus): experience with robotics, experience with computer vision/recognition, design of DNN architecture and optimizations, strong understanding of mathematics (linear algebra, Bayesian statistics, and mathematical optimal control).

[Product, Service]
Entertainment or enterprise/professional products and services (e.g. cloud gaming, gaming consoles, automotive services, XR, and other applications that require significant computing power).

[Development Environment]
-OS: Linux/Windows
-Cloud: AWS
-SCM: Git (GitHub)

Stipend Details

Stipend:	10,000 JPY Per Working Day
Accommodation:	Yes
Travel Expenses:	Yes
Perks / Bonus:	[Stipend]

Bachelor: JPY 10,000/ working day (Net)
Master: JPY 11,000/ working day (Net)

Your stipend will be calculated based on the working day.

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)

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

Selection Process

Resume Shortlist:	Yes
Written Test:	No
Online Test:	No
Group Discussion:	No
Personal Interview:	Yes
No. of Offers:	2
Selection Process:	*To submit CV& Essay is compulsory. The Essay format will be distributed through placement office. Please follow the instruction given by the placement office.

Eligibility

Diversity Recruiting:	No
Eligible Years:	Graduating in 2025 (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 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, Master of Design in Industrial Design