

Dear EEE Alumni

OmniVision Technologies is a leading developer of advanced digital imaging solutions, with best-in-class CMOS image sensor technology. OmniVision Singapore Technologies is expanding their Singapore's office and recruiting for many interesting engineering positions.

If you are interested in any of the positions, please write to Ms Ingrid at [ingrid@ovt.com](mailto:ingrid@ovt.com). We wish you all the best.

Regards

**E<sup>3</sup> Alumni**

<http://www.eee.ntu.edu.sg/alumni>

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**OmniVision Technologies Web:** <https://www.ovt.com/>

**Singapore Address :** 3A International Business Park, #06-07/08, Tower A, Icon@IBP, Singapore 609935

**[Position A: \(Staff / Sr.\) Algorithm Engineer \(Computer Vision\)](#)**

**Position Overview:**

Be responsible to research and develop innovative computer vision/deep learning algorithms for image applications

**Responsibilities:**

- Research, develop and optimize computer vision/deep learning algorithms for image applications, such as, object recognition, face recognition, video analytics, and 3D reconstruction.
- Explore, design and implement new algorithms/features according to marketing requirements.
- Algorithm testing and verification.
- Algorithm integration in system architecture.

**Experience & Skill:**

- PhD/MS degree with equivalent practical experience in Computer Science or Electrical Engineering or related disciplines such as Applied Mathematics/Statistics.
- Broad knowledge in various computer vision related topics such as deep learning, object recognition (detection, classification, segmentation) and tracking, stereo, and/or 3D reconstruction.
- Strong knowledge and extensive hands-on experience of independent algorithm research; candidate with strong mathematics background is a plus.
- Excellent C/C++ programming skills, proficient with scripting languages (e.g. Python or Matlab), and extensive experience with OpenCV.
- Excellent verbal and written communication skills.

**[Position B: \(Staff / Sr.\) Algorithm Engineer \(Image Process\)](#)**

**Position Overview**

Develop image/video processing algorithms for camera related applications.

#### **Responsibilities**

- Research and develop new image processing techniques and technologies for digital camera system
- Expand existing solutions to new levels of functionality, quality, and performance.
- Assist other teams with algorithm implementation, testing and verification.
- Drive new ideas and image processing solutions for next generation ISP.

#### **Requirements**

- PhD/MS degree with related practical experience in Electrical Engineering, Computer Science or equivalent.
- Deep knowledge and experience in developing, implementing and deploying image processing algorithms for ISPs, or CMOS image sensors
- Familiarity with image and color processing techniques, including HDR, AWB, color correction, noise reduction, IR removal/suppression and CFA demosaicing, etc.
- Strong mathematics background and track record of independent algorithm research.
- Strong programming skills in C/C++ and in a rapid prototyping environment.
- Good understanding of digital photography, image quality and stereo vision.
- Demonstrate great teamwork, outstanding communication skills, and willingness to learn.

### **Position C: (Staff / Sr.) Audio System Engineer (Singapore)**

#### **Position Overview**

The candidate will be part of the audio design team to provide audio and acoustic solution for the doorbell product family and surveillance camera product family, based on Omnivision video System-on-Chip (SOC).

#### **Responsibilities**

- Understand the audio datapath of the products, including both the digital signal processing and the analog circuit operation.
- Understand the requirement of the audio algorithm and create corresponding test cases.
- Qualify the audio performance of the product, based on customer requirement or algorithm requirement.
- Debug the audio performance issue from both software and hardware aspect.

#### **Requirements**

- Extensive audio hardware knowledge, including I2S, audio codec operation and parametric measurement, acoustic mechanical design.
- Understand the audio device driver operation. Knowledge on ALSA is a plus.
- Able to debug the audio performance issue independently.
- Able to work with the audio device driver developer, audio algorithm developer and hardware designer to complete the audio solution.

### **Position D: (Sr.) Embedded Software Engineer (Singapore)**

#### **Position Overview**

- We are looking for self-motivated and self-starting engineers to design, implement, integrate, test and maintain software for embedded systems.

- You will work closely with the project team to define and manage deliverables and their milestones.
- You are required to have good appreciation of various design patterns, their trade-off, and implementation intricacy.
- To excel, you will need to have keen eyes for debugging and trouble-shooting not just the DUT but possibly the system/sub-system concerned.
- Familiarity in SDLC is essential to ensure productivity.
- Strong programming skill is a given.

### **Responsibilities**

- Responsible for the full SDLC of software for embedded systems and related toolchains.
- Responsible for verification, validation and performance testing and benchmarking of deliverables.
- Plan and coordinate projects with teams globally and execute independently.

### **Requirements**

Candidate qualifications include:

- Excellent coding skills with C and/or C++ is a given.
- Excellent debugging skill; ability to trace difficult problems using a variety of tools (debugger, JTAG emulator, logic analyser, oscilloscope).
- Experience with embedded software development tools (compilers, assemblers, linkers).
- Experience with source code management (GIT, SVN).
- Experience with Python and/or JAVA is highly preferred.
- Experience with any RTOS.
- Experience with embedded system involving multi-cores (CPU/DSP/GPU/NPU).
- Knowledge of Linux kernel and driver development is a plus.
- Knowledge of continuous integration framework (Jenkins, Travis) is a plus.
- Knowledge of Eclipse plugin development is a plus.

## **Position E: Staff Embedded Software Engineer**

### **Position Overview**

For staff level, you are expected to be strong in architectural patterns, able to view the system design in both top-down and bottom-up manners, and design suitable SW architecture for the concerned system/sub-system.

You are required to mentor junior team members, lead in code reviews, and drive design best practices.

### **Responsibilities**

- Responsible for definition and architectural design decisions.
- Mentor and guide junior and senior team members; code review and coaching.
- Assist project manager to drive efficient SDLC.

### **Requirements**

- Excellent understanding of various design and architecture patterns, their trade-off and implementations.
- Translate architecture and design idea/concepts into clear SW specifications.

Strong consideration will be given for any of these additional qualifications:

- Knowledge of machine learning / deep learning.
- Knowledge of computer vision and image processing.
- Knowledge of audio/speech processing.

### **Position F: (Staff / Sr.) Digital IC Design Engineer (Singapore)**

#### **Position Overview**

In the Singapore ASIC Design Centre, you would be part of an experienced and talented design team to develop Video Processor SoC, with advanced video analytics for smart home, security, automotive & IoT applications. From innovative video processor architectures, to advanced video analytics, you can have a hand in breakthroughs and reinventing the digital world.

#### **Responsibilities**

You would be part of a dynamic digital IC design team that develops state-of-the-art video processing, advanced video analytics accelerators, and full Video Processor SoC. You would be joining the team to explore, evaluate and define innovative design micro-architectures, to meet the technological requirements of the IP and SoC. You would be responsible for the successful implementation of the designs in Verilog/SystemVerilog coding, metrics measurement to meet key objectives & results. You would also be responsible for developing and deploying state-of-the-art verification methodologies in ever-increasing design complexities, from UVM, C/C++ co-simulation, system emulation to mixed-mode simulation & formal verification.

#### **Requirements**

- Experience in micro-architectures design, and RTL coding with Verilog/SystemVerilog
- Experience in synthesis, with analysis of power, timing and area
- Experience in UVM verification methodology
- Disciplined, quality-minded, and highly driven for excellence,
- Excellent team player and good communication skills
- MSEE/BSEE in Electrical Engineering or Computer Engineering, with 3 years of relevant experience
- Candidates with relevant experiences would be offered as Senior or Staff, taking on higher responsibilities
- Experience in video processing and video analytics is a plus
- Passionate and strong in general programming is a plus