



**Qualcomm Israel Ltd.**

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**Open positions in the Camera system team:**

**1. Algorithm engineer for video stabilization development**

- a. Join the video stabilization team
- b. Invent, improve, extend and develop the video stabilization solution
- c. Involves algorithm development around:
  - i. Stabilization core algorithm development (the ability to distinguish between intentional motion and shake)
  - ii. Sensor & optics related distortions and how to correct them
  - iii. Computer vision and image motion analysis
  - iv. Work with IMU data (Gyro, accelerometer)
- d. Require skills:
  - i. Algorithm development in the image processing / CV domains
  - ii. Coding in C++, Python and Matlab
  - iii. Image sensor (visible light), optics and IMU related knowhow (advantage)
  - iv. Familiar with videography and video processing in general (advantage)
  - v. ML/DL related experience (advantage)
- e. Experience
  - i. Work experience is not mandatory, but we require to have at least image-processing / CV algorithm experience from a project during studies.

**2. Algorithm engineer for video processing development**

- a. Join the team who work on next-gen video processing engine
- b. Solve problems, invent, improve, extend and develop a full solution for video processing (from unprocessed raw data to final image)
- c. Involved algorithm development around:
  - i. Video/temporal processing (mostly denoising and sharpening) using state of the art approaches
  - ii. Motion analysis
  - iii. Image alignment
- d. Required skills:
  - i. Algorithm development in the image processing domain
  - ii. Coding in C++ Python (PyTorch) and Matlab
  - iii. Deep-Learning work or project experience

- iv. Mathematical optimization (advantage)
- v. Complex flow (HW/SW) development (advantage)
- vi. HW architecture knowhow (advantage)
- vii. Familiar with videography and video processing in general (advantage)
- e. Experience:
  - i. Work experience is not mandatory, but we require to have at least image-processing and Deep-Learning experience from a project during studies.

### **3. Electrical engineer for Image processing and image warping development**

- a. Join the video pipeline team
- b. Responsibilities and goals:
  - i. Invent, improve, extend and develop hardware warping engine and other video-processing related components
  - ii. Architecture and algorithm definition (not HDL coding, but the high-level definition of the core and its algorithm/math)
    - 1. Geometric warping
    - 2. Interpolation
    - 3. Cache management
    - 4. DRAM access
- c. Required skills:
  - i. Architecture and algorithm development in the image processing domain
  - ii. Coding in C++, Matlab & Python
  - iii. HW architecture knowhow
  - iv. Optics, distortion and image warping (advantage)
  - v. Familiar with videography and video processing in general (advantage)
- d. Experience – required, at least 2y of proven relevant work

### **4. Image quality and tuning expert**

- a. Join the commercialization & IQ team
- b. Responsibilities and goals:
  - i. Ownership of latest ISP-solution tuning
  - ii. image quality analysis & competitor analysis
  - iii. Training internal and external customers on how to tune the new ISP (each year) – require some travel
  - iv. Content acquisition and R&D support
  - v. Create demos of new algorithms and features
- c. Required skills:
  - i. Image quality understanding
  - ii. Photography and videography knowhow and technical skills
  - iii. Good communication skills – writing guidelines and frontal training in English
  - iv. Methodic and organized

- v. C++ programming skills (advantage)
- d. Experience – required, at least 4y of proven work on this domain

## 5. System SW programmer

- a. Join the system-SW team
- b. Responsibilities and goals:
  - i. Develop new Camera flows and features as means to enable additional use-cases on a given chip version
  - ii. Work closely with the camera system team and other global teams
  - iii. Deliver SW libraries that power the commercial Qualcomm ISP
- c. Required skills:
  - i. Strong software development skills (C++) backed with good end to end analytic skills
  - ii. Strong communication skills
  - iii. Team player
  - iv. Experience with native Android – advantage.
  - v. Experience with image and video processing – advantage
- d. Experience: 3-5y of proven experience in developing SW solutions

## 6. System student position for camera team

- a. Join one of the camera system teams
- b. Responsibilities and goals:
  - i. Support algorithm development in the image and video processing domain
    - 1. Implementation of algorithms (in simulator)
    - 2. Quality evaluating
    - 3. Content acquisition and augmentation
    - 4. Automation & scripting
- c. Required skills:
  - i. C++, Matlab and Python programming capabilities
  - ii. Taking (plan to take) the signal-processing / Image-processing / machine learning courses - advantage
  - iii. Background in CV and DL from projects – advantage
  - iv. Comes from CS or EE faculties
- d. Experience - Currently in semester 4-5

## 7 Software Engineering - Engineer, SVE team

As a member of the SVE team, you will be responsible for developing embedded software drivers, firmware and tests for Qualcomm Snapdragon chips. You will work closely with system architects, software teams, hardware designers and verification engineers on cutting edge mobile HW/SW as part of the pre and post silicon development and validation efforts.

Minimum Qualifications:

- 2-3 years of experience in developing embedded software
- Strong programming skills in C, C++, Assembly
- Strong software design skills backed with good analytical, debug and problem solving abilities
- Excellent understanding of operating systems and real time embedded systems
- Experience with real-time embedded software and device drivers (VxWorks, Linux, etc)
- Knowledge of SoC architectures, ARM microprocessor architecture and/or DSP architectures is an advantage
- Familiarity and experience with USB, PCIe, UFS, Flash, SPI controllers is an advantage
- Experience with hardware debug equipment such as JTAG, scope, logic analyzer is an advantage

Required: Bachelor's, Computer Engineering or equivalent experience

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יש לציין בכותרת המייל את שם המשרה