

## Project #2: Real-Time Video Filtering Using WebGPU Compute Shaders

- Goal: To implement three real-time video filters using WebGPU. (See the video.)
- Requirements
  - (20 points) grayscale filter
  - (30 points) (Slow) Gaussian blur filter ( $7 \times 7$ ) without using the workgroup memory
  - (50 points) (Fast) Gaussian blur filter ( $7 \times 7$ ) using the workgroup memory
- Support Files
  - `proj2-js.html`: A JavaScript demo for digital image filtering. Don't submit this.
  - `proj2.html`: A skeleton file. Complete and submit this file.
  - `proj2.mov`: demo video
  - Other resource files required to run the demos
- Submission
  - `proj2.html`
  - `readme.txt`: Briefly describe what you succeed or fail to implement.
  - **Don't forget to press the "Submit" button after uploading your files!!!**
- References
  - **How to open the FPS meter?** (for Google Chrome browser) (Try after opening the "Developer Tools.")