

```
std::binary_function  
< Predicate::first_argument  
_type, Predicate::second  
_argument_type, bool >
```

```
cv::gpu::device::binary  
_function< Predicate::  
first_argument_type, Predicate  
::second_argument_type, bool >
```

```
cv::gpu::device::binary  
_negate< Predicate >
```

```
graph RL; A[std::binary_function< Predicate::first_argument_type, Predicate::second_argument_type, bool >] --> B[cv::gpu::device::binary_function< Predicate::first_argument_type, Predicate::second_argument_type, bool >]; B --> C[cv::gpu::device::binary_negate< Predicate >];
```

The diagram illustrates the inheritance of the `binary_function` trait from the `std` namespace to the `cv::gpu::device` namespace. It consists of three boxes connected by arrows pointing from right to left. The rightmost box (shaded gray) represents the `cv::gpu::device::binary_negate` struct, which inherits from the `cv::gpu::device::binary_function` struct shown in the middle box. This middle struct, in turn, inherits from the `std::binary_function` struct shown in the leftmost box.