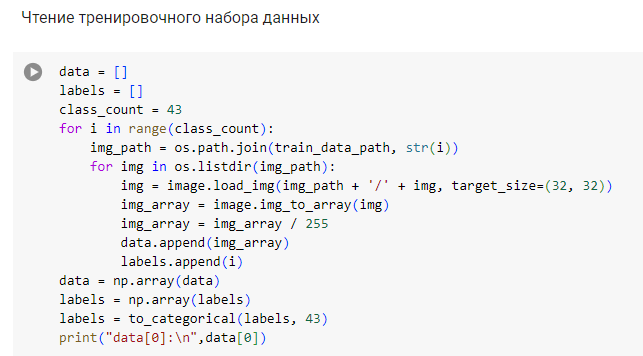
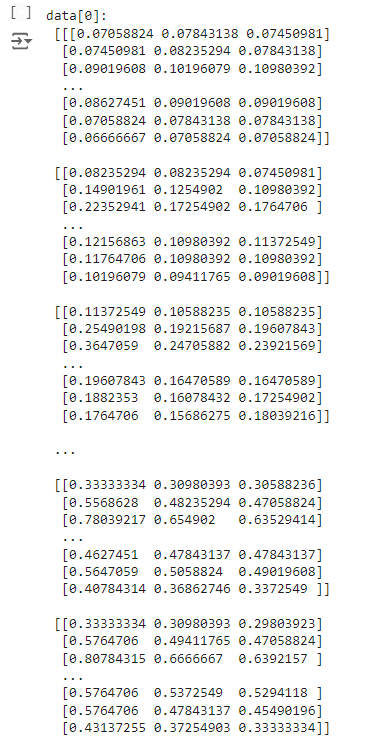
**Задание 1**

Загружаем данные

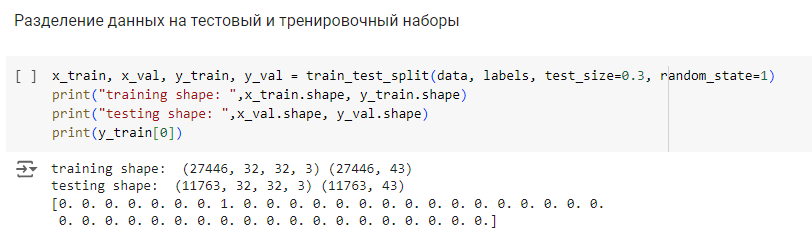


Читаем тренировочный набор

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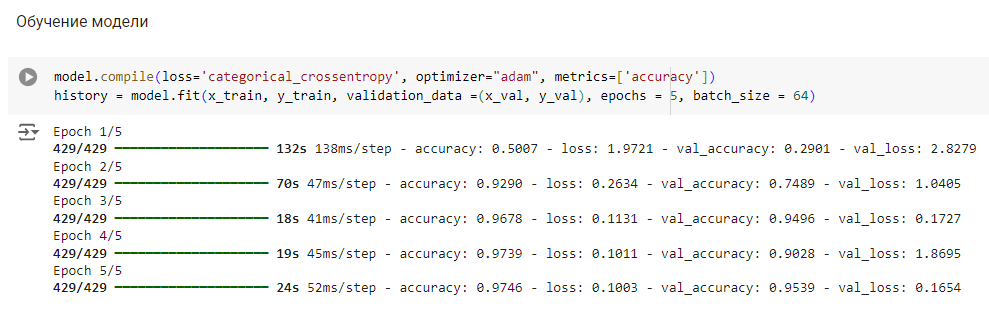
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Разделение данных на тестовый и тренировочный наборы

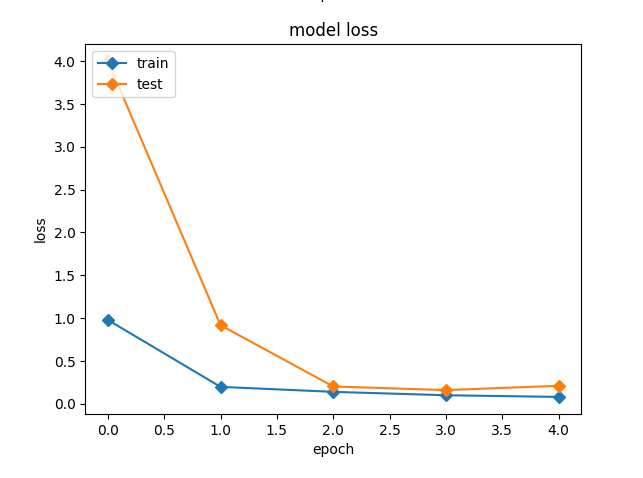
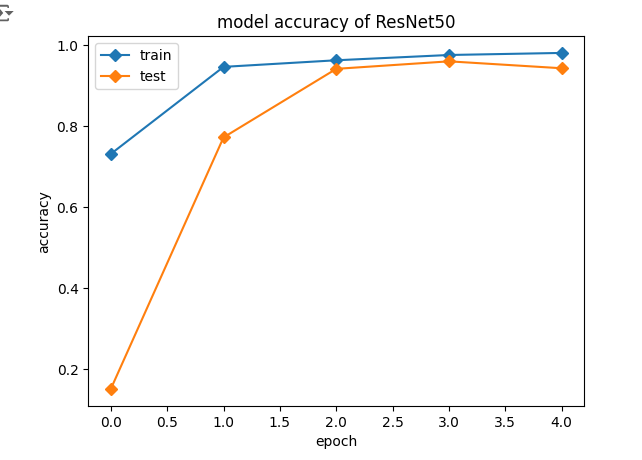
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**Модель ResNet50**

Обучение модели в числе 5 эпох

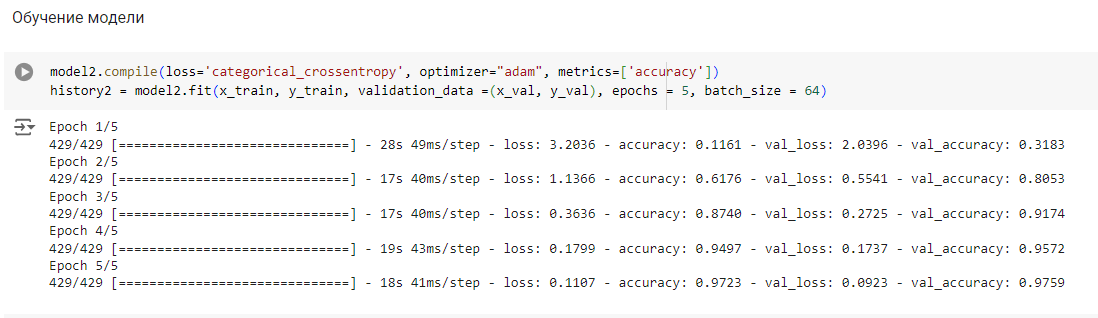
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Точность модели ResNet50 в виде графиков

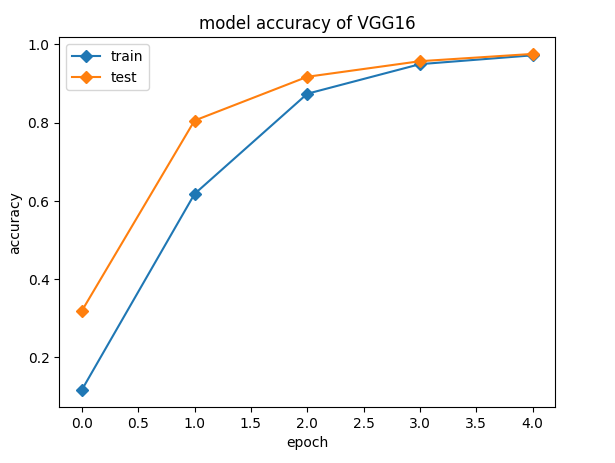


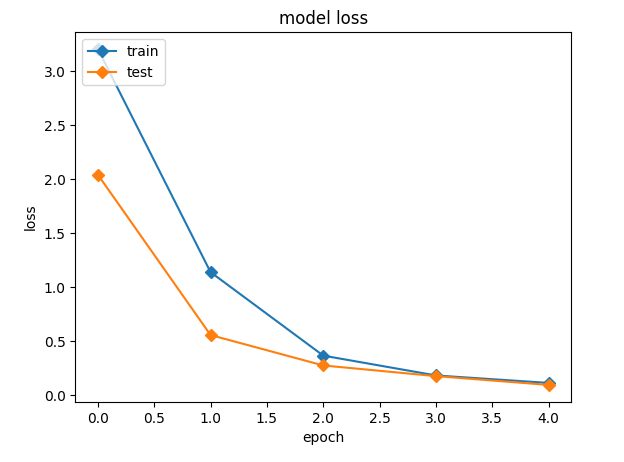
**Модель VGG16**

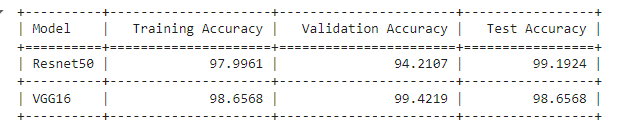
Обучение модели в числе 5 эпох



Точность модели ResNet50 в виде графиков





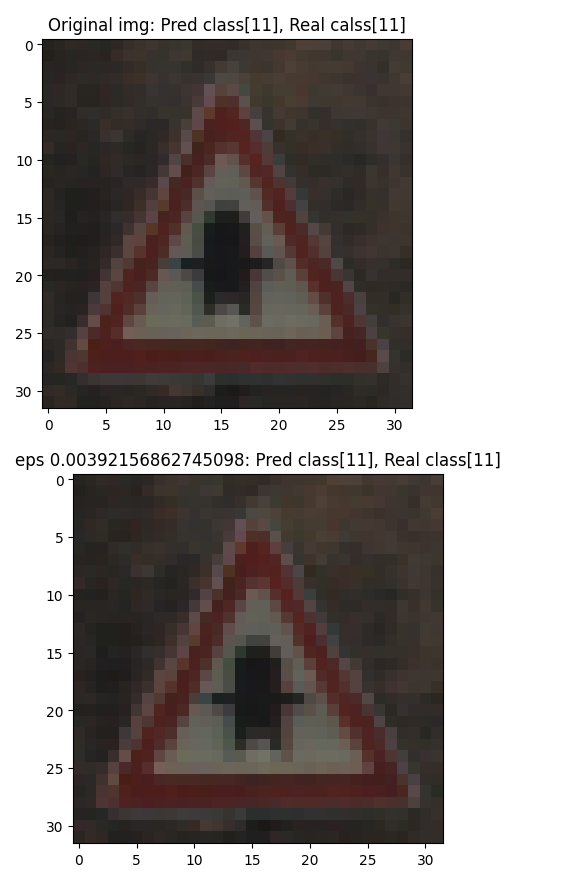


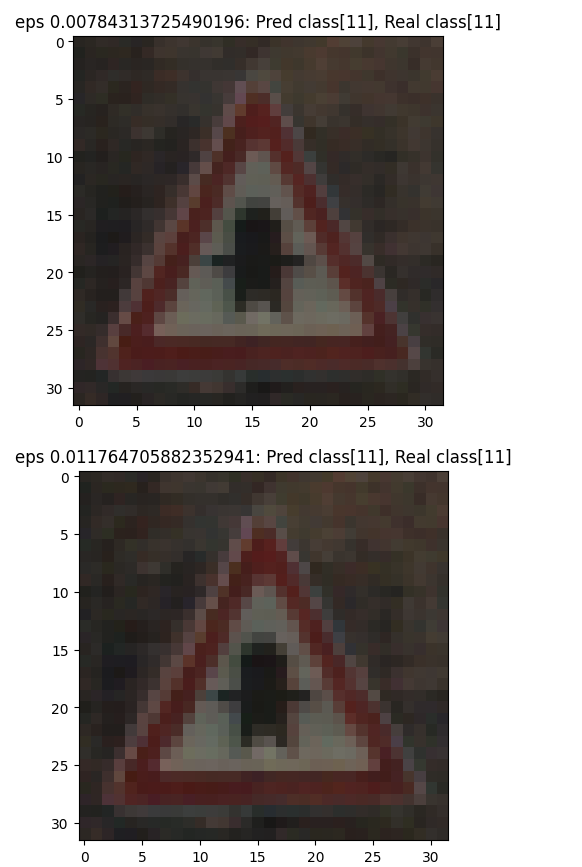
**Задание 2**

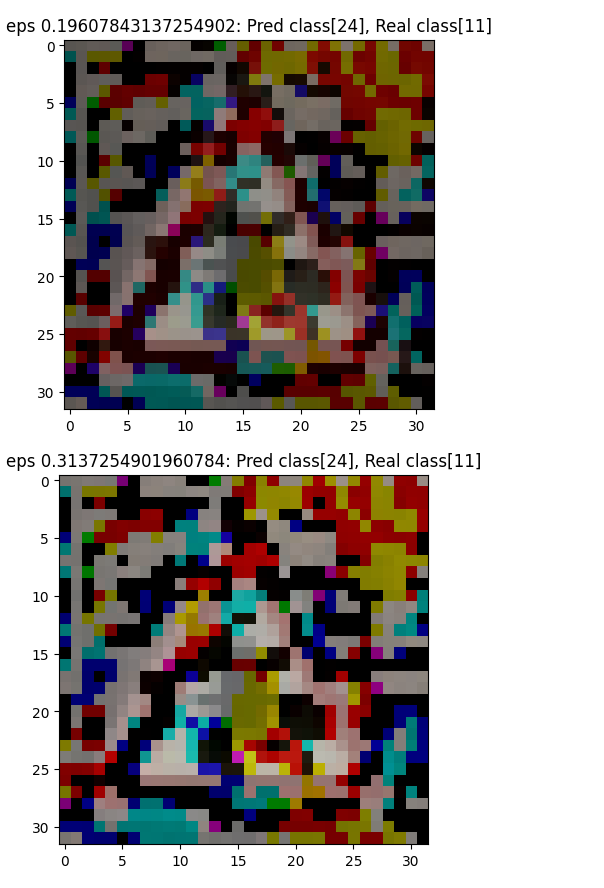
**Атаки FGSM и PGD на модель ResNet50**

**ResNet50 FGSM**

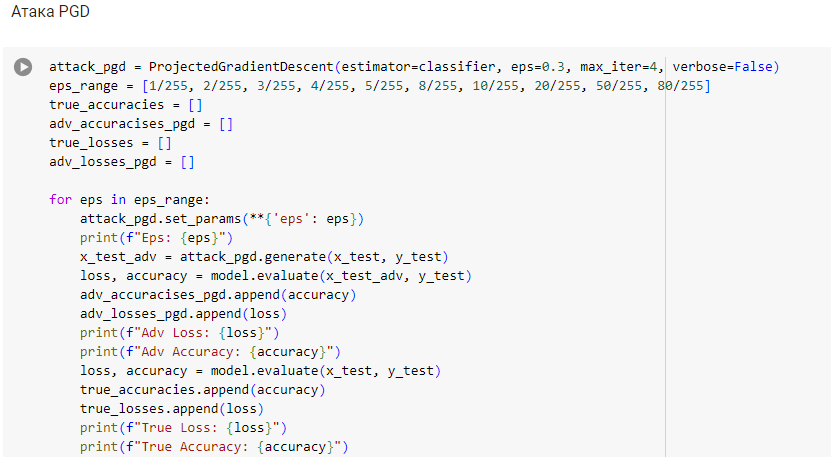
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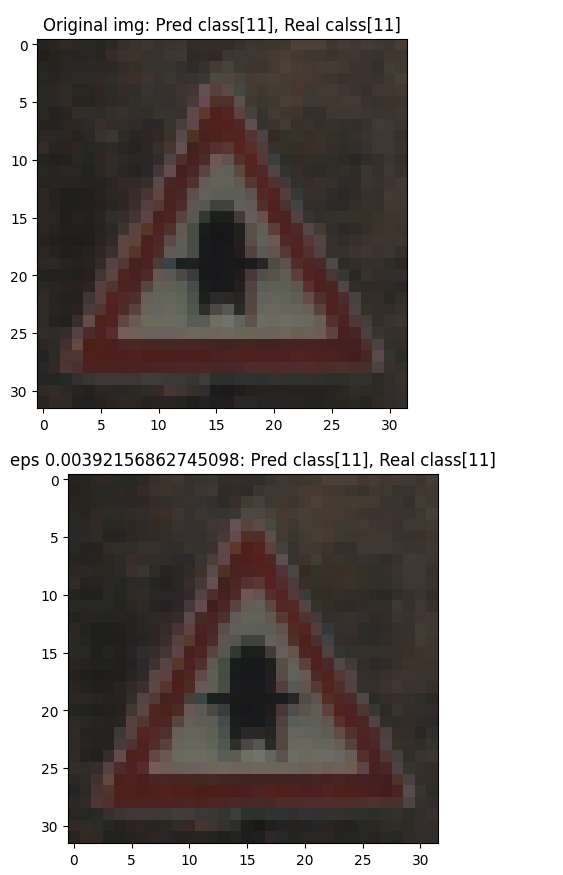
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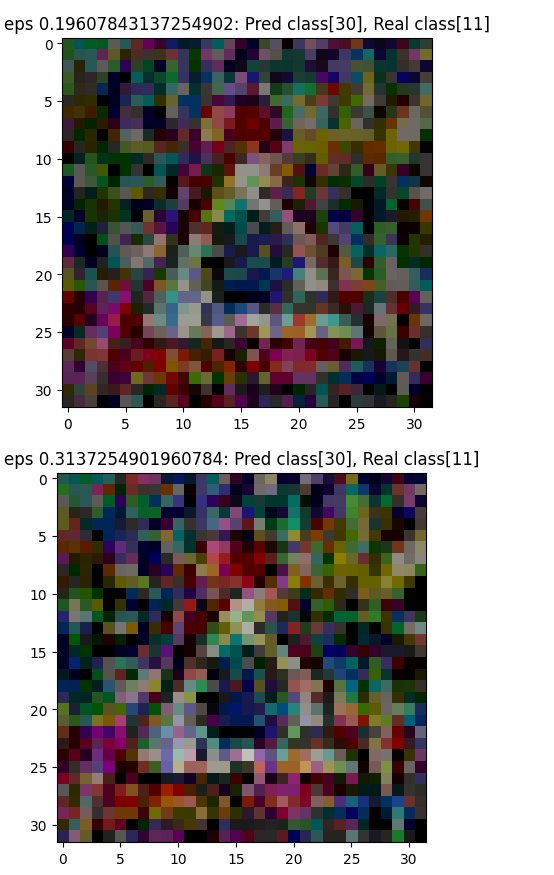
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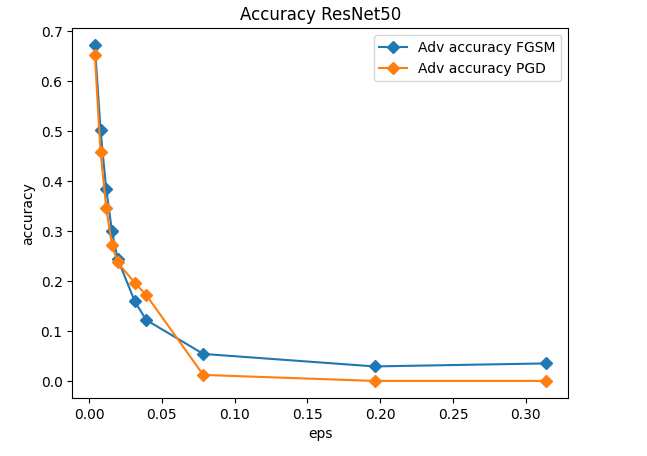
**ResNet50 PGD**

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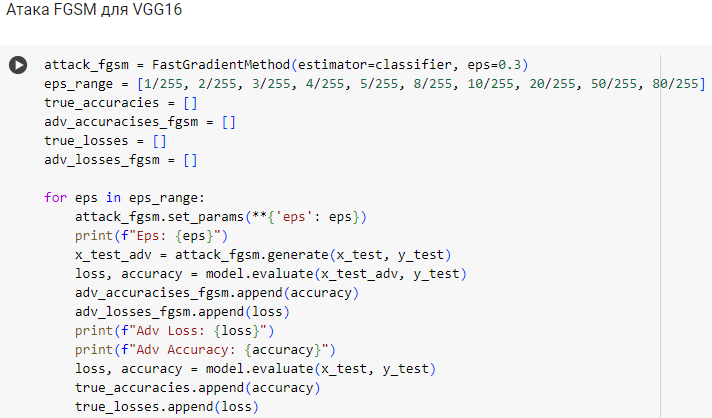
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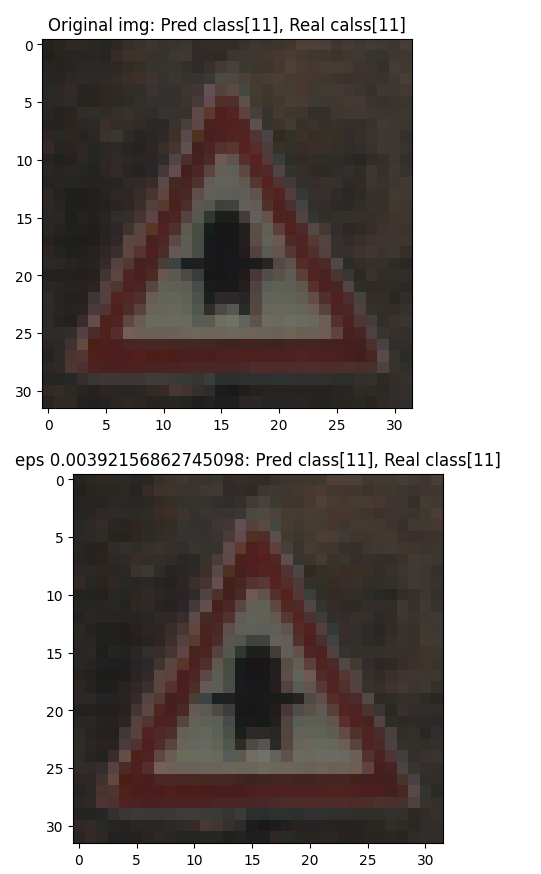
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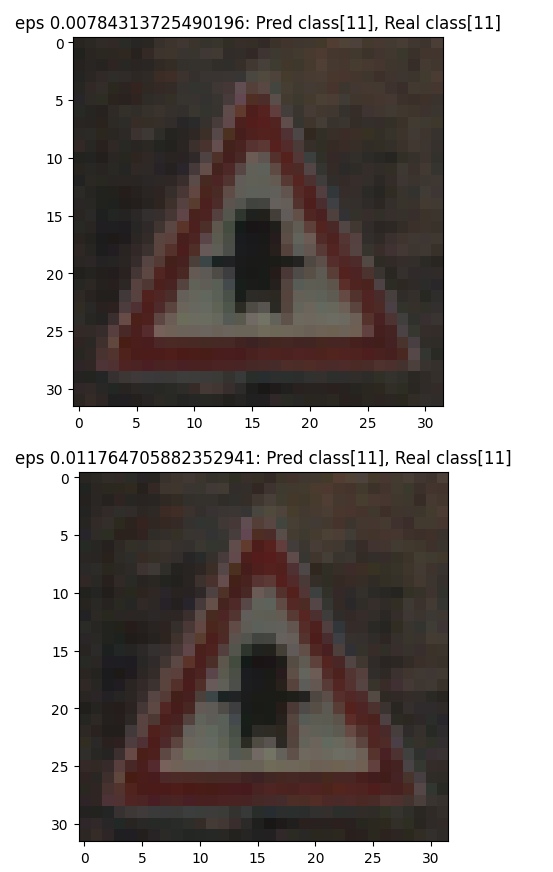
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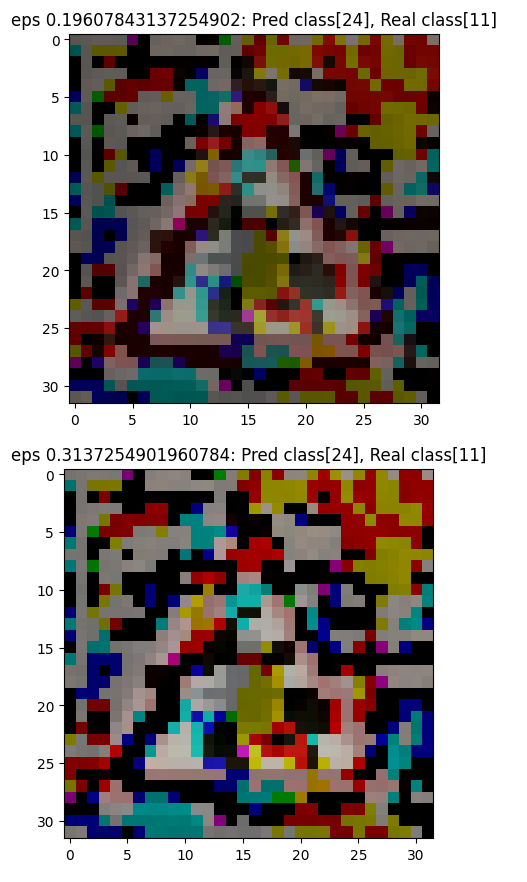


**VGG16 FGSM**

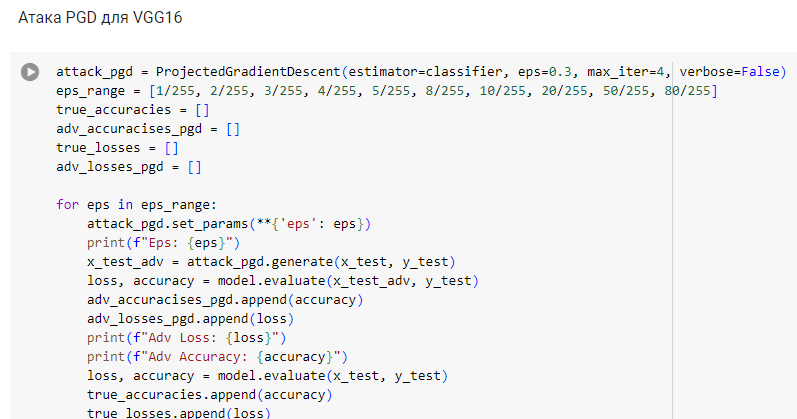
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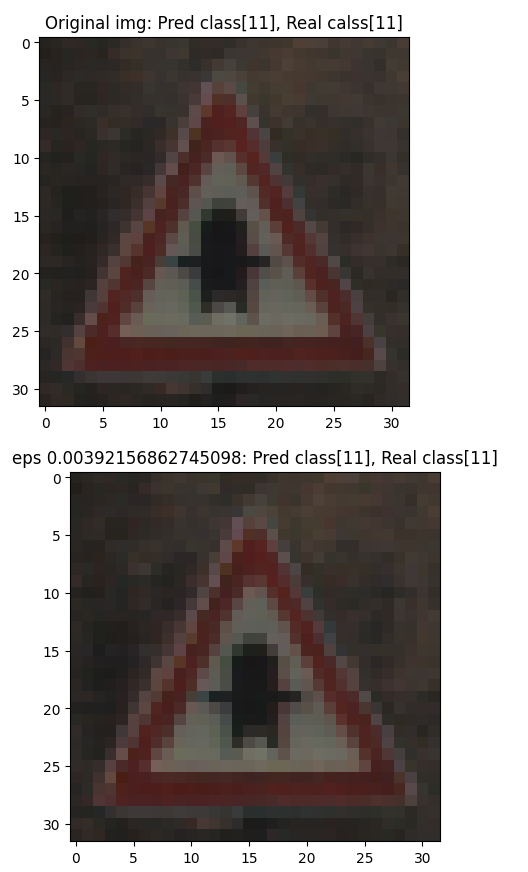
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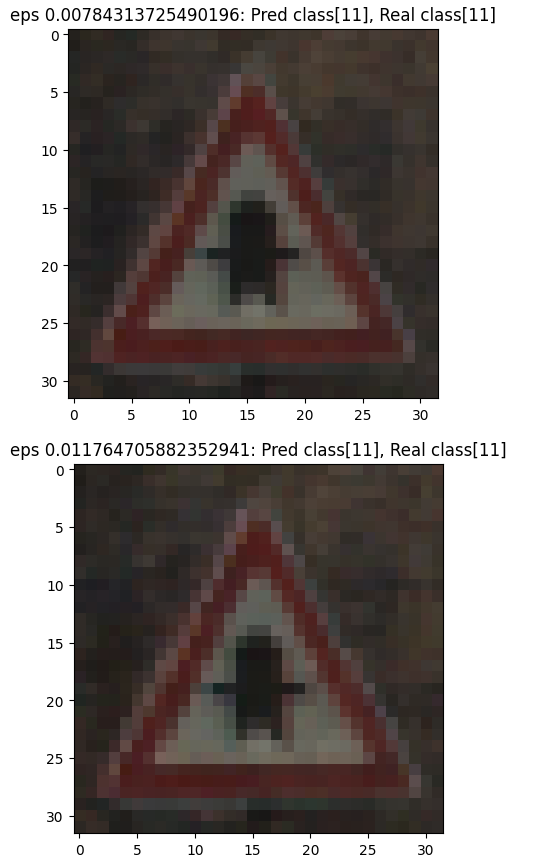
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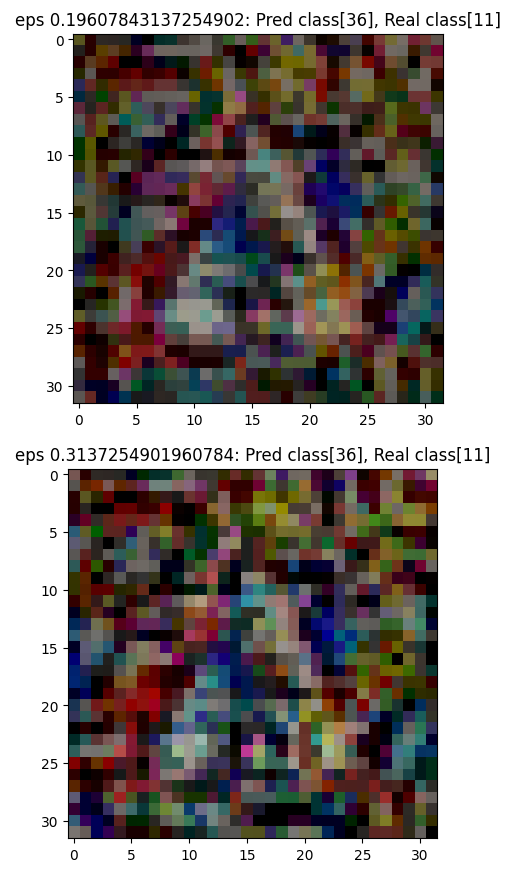
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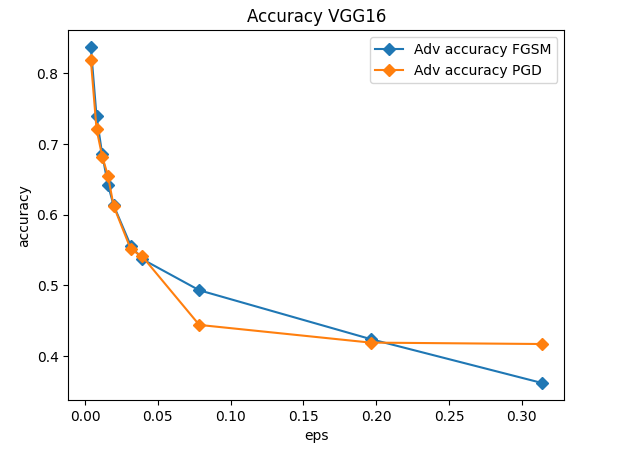
**VGG16 PGD**

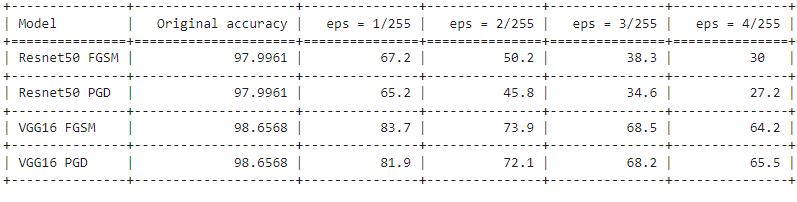
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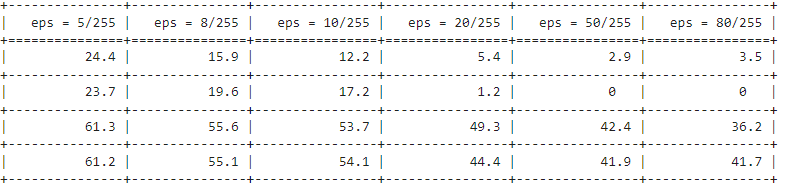
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**Задание 3**

**Атака FGSM на знак Стоп**

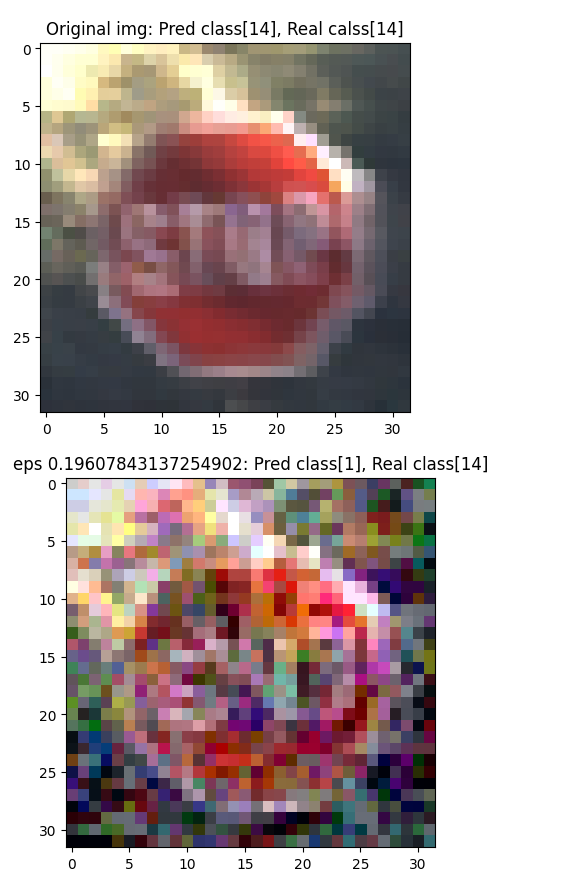
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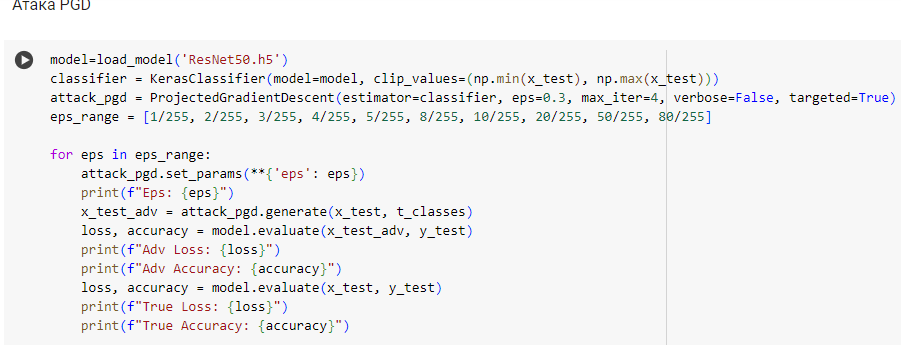
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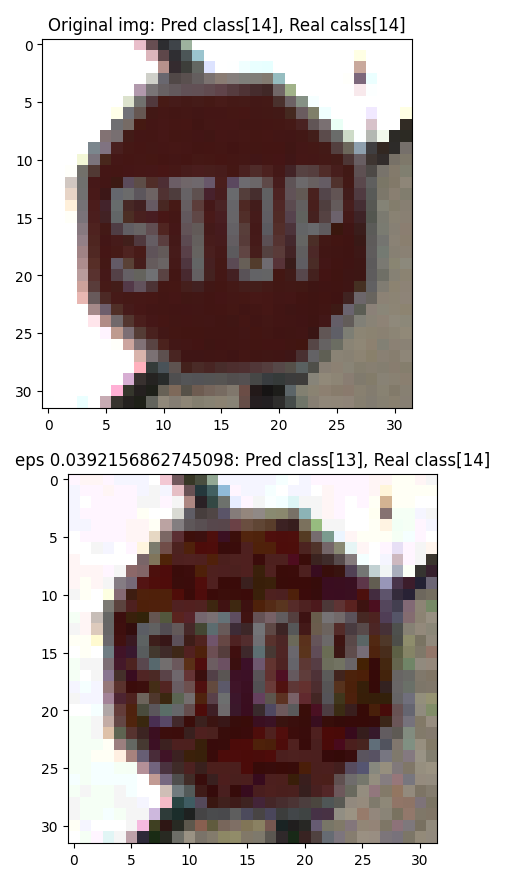
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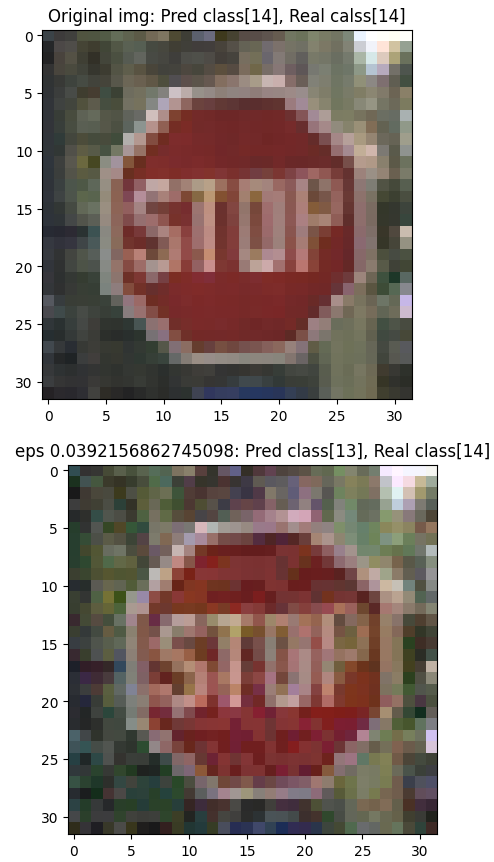
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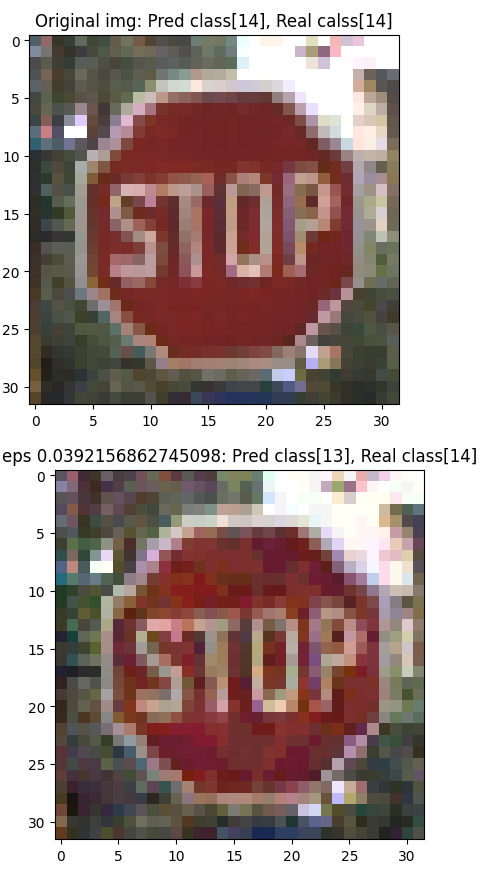
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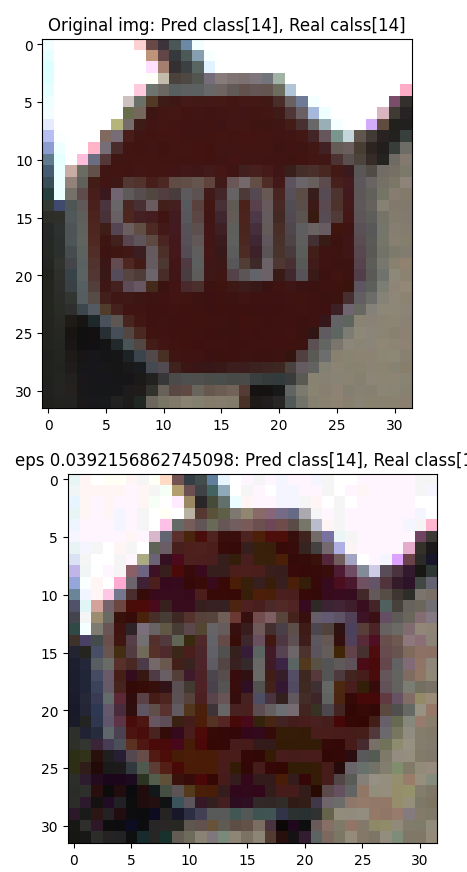
**Атака PGD на знак Стоп**

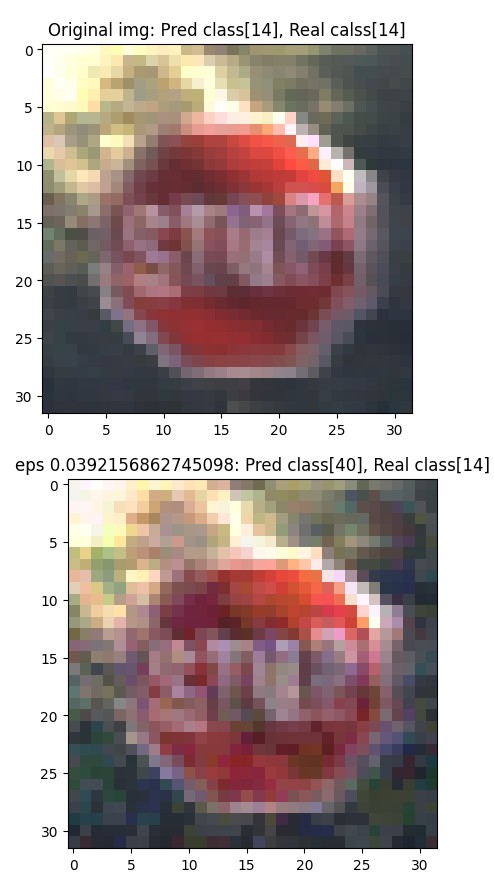
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