

Sonuçlar:

1. Tüm testler için accuracy değerlerinin karşılaştırması:

| Accuracy karşılaştırması: | Adam, B.S.=128, lr=0.001 | SGD, B.S.=128, lr=0.001 | Adam, B.S.=64, lr=0.001 | SGD, B.S.=64, lr=0.001 |
|---|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| ResNet 18 (kendi resnetimiz) | 89.01 | 88.46 | 90.43 | - |
| Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18) | 90.24 | 89.79 | 91.17 | - |
| Light ResNet 18 | 77.53 | 73.27 | 78.10 | - |
| Knowledge sonrası student (teacher: ResNet 18, student: Light ResNet 18) | 88.94 | 88.09 | 89.20 | - |
| Transfer L. (2,3,4. katmanlar kapalı) | 43.47 | 40.63 | 43.17 | - |
| Transfer L. (2,3,4. katmanlar açık) | 86.36 | 84.38 | 86.30 | - |

2. Adam, Batch size=128, lr=0.001:

| Adam, Batch size=128, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|---|----------|-----------|--------|----------|
| ResNet 18 (kendi resnetimiz) | 89.01 | 89.01 | 89.01 | 89.00 |
| Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18) | 90.24 | 90.29 | 90.24 | 90.24 |
| Light ResNet 18 | 77.53 | 77.38 | 77.53 | 77.37 |
| Knowledge sonrası student (teacher: ResNet 18, student: Light ResNet 18) | 88.94 | 88.95 | 88.94 | 88.92 |

| Adam, Batch size=128, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|---|----------|-----------|--------|----------|
| Transfer Learning (2,3,4. katmanlar açık) | 86.36 | 86.36 | 86.36 | 86.36 |
| Transfer L. (2,3,4. katmanlar kapalı) | 43.47 | 43.39 | 43.47 | 43.33 |

3. SGD, Batch size=128, lr=0.001:

| SGD, Batch size=128, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|---|----------|-----------|--------|----------|
| ResNet 18 (kendi resnetimiz) | 88.46 | 88.48 | 88.46 | 88.45 |
| Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18) | 89.79 | 89.88 | 89.79 | 89.82 |
| Light ResNet 18 | 73.27 | 73.32 | 73.27 | 73.29 |
| Knowledge sonrası student (teacher: ResNet 18, student: Light ResNet 18) | 88.09 | 88.07 | 88.09 | 88.04 |

| SGD, Batch size=128, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|---|----------|-----------|--------|----------|
| Transfer Learning (2,3,4. katmanlar açık) | 84.38 | 84.31 | 84.38 | 84.33 |
| Transfer L. (2,3,4. katmanlar kapalı) | 40.63 | 41.39 | 40.63 | 40.46 |

4. Adam, Batch size=64, lr=0.001:

| Adam, Batch size=64, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|--|----------|-----------|--------|----------|
| ResNet 18 (kendi resnetimiz) | 90.43 | 90.51 | 90.43 | 90.46 |
| Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18) | 91.17 | 91.15 | 91.17 | 91.15 |
| Light ResNet 18 | 78.10 | 78.21 | 78.10 | 78.13 |
| Knowledge sonrası student (teacher: ResNet 18, student: Light ResNet 18) | 89.20 | 89.25 | 89.20 | 89.20 |

| Adam, Batch size=64, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|---|----------|-----------|--------|----------|
| Transfer Learning (2,3,4. katmanlar açık) | 86.30 | 86.37 | 86.30 | 86.31 |
| Transfer L. (2,3,4. katmanlar kapalı) | 43.17 | 43.61 | 43.17 | 42.91 |

5. SGD, Batch size=64, lr=0.001: ekleyebiliriz vakit olursa

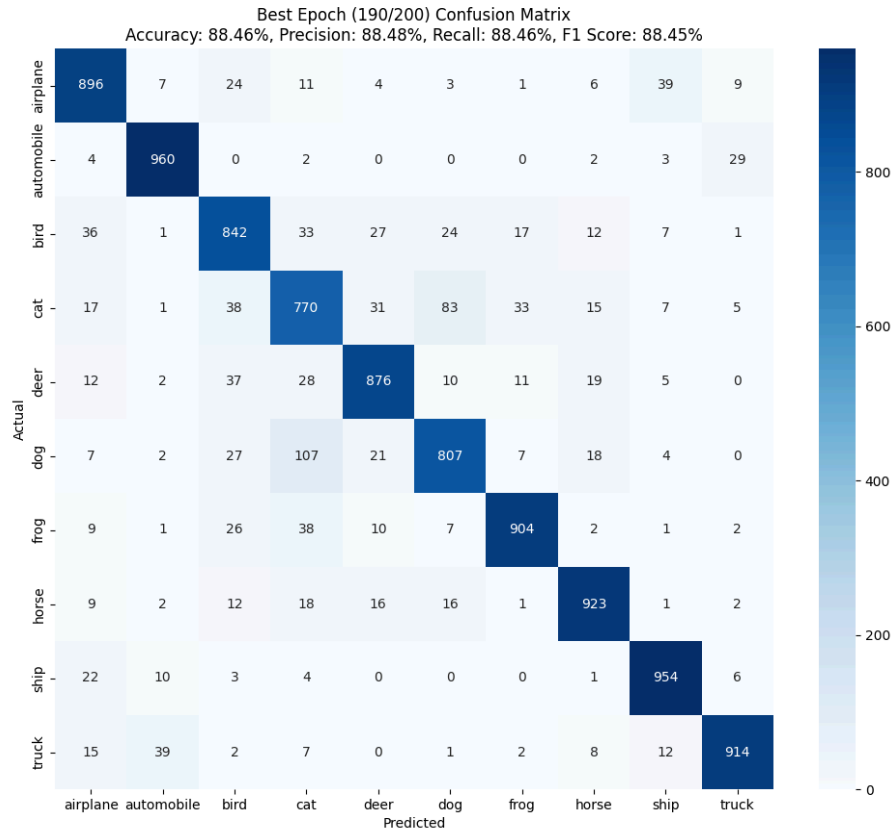
| SGD, Batch size=64, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|--|----------|-----------|--------|----------|
| ResNet 18 (kendi resnetimiz) | - | - | - | - |
| Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18) | - | - | - | - |
| Light ResNet 18 | - | - | - | - |
| Knowledge sonrası student (teacher: ResNet 18, student: Light ResNet 18) | - | - | - | - |

| SGD, Batch size=128, lr=0.001 | Accuracy | Precision | Recall | F1 Score |
|---|----------|-----------|--------|----------|
| Transfer Learning (2,3,4. katmanlar açık) | - | - | - | - |
| Transfer L. (2,3,4. katmanlar kapalı) | - | - | - | - |

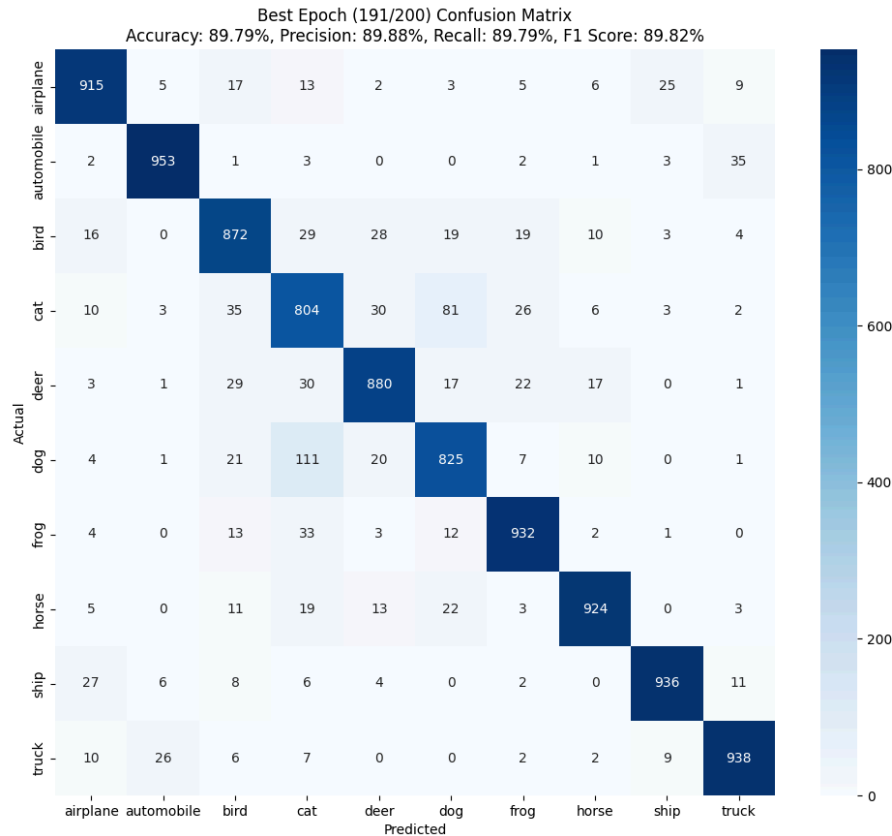
6. Knowledge Distillation Confusion Matrisler:

SGD, Batch size=128, lr=0.001 için:

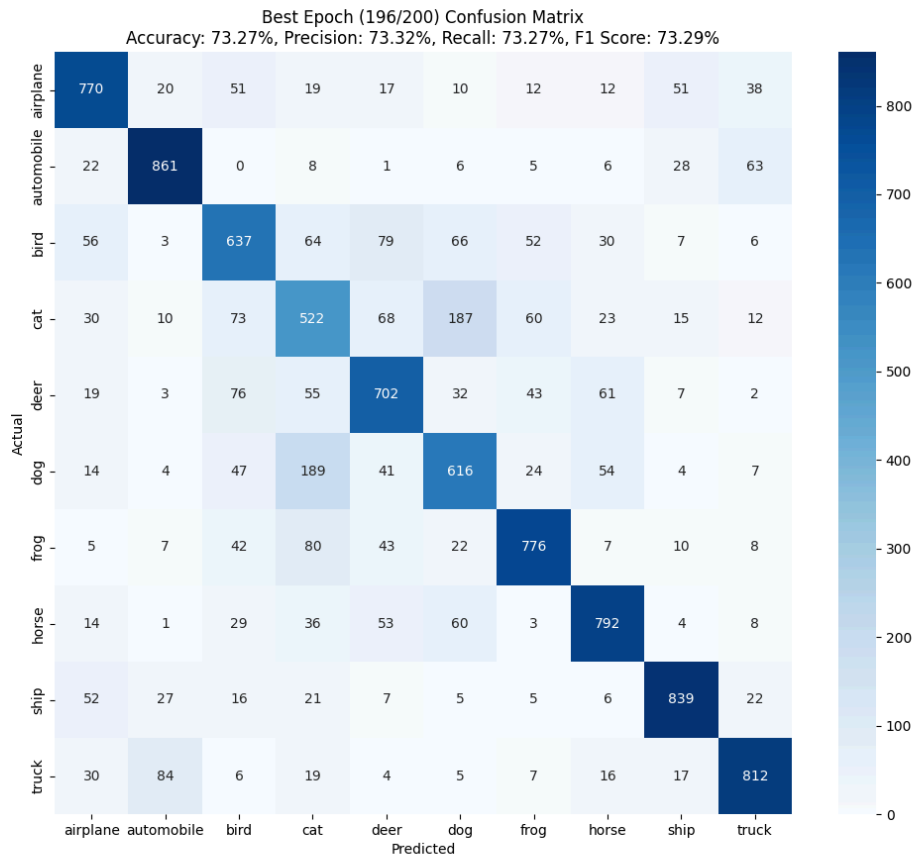
- ResNet 18 (kendi resnetimiz):**



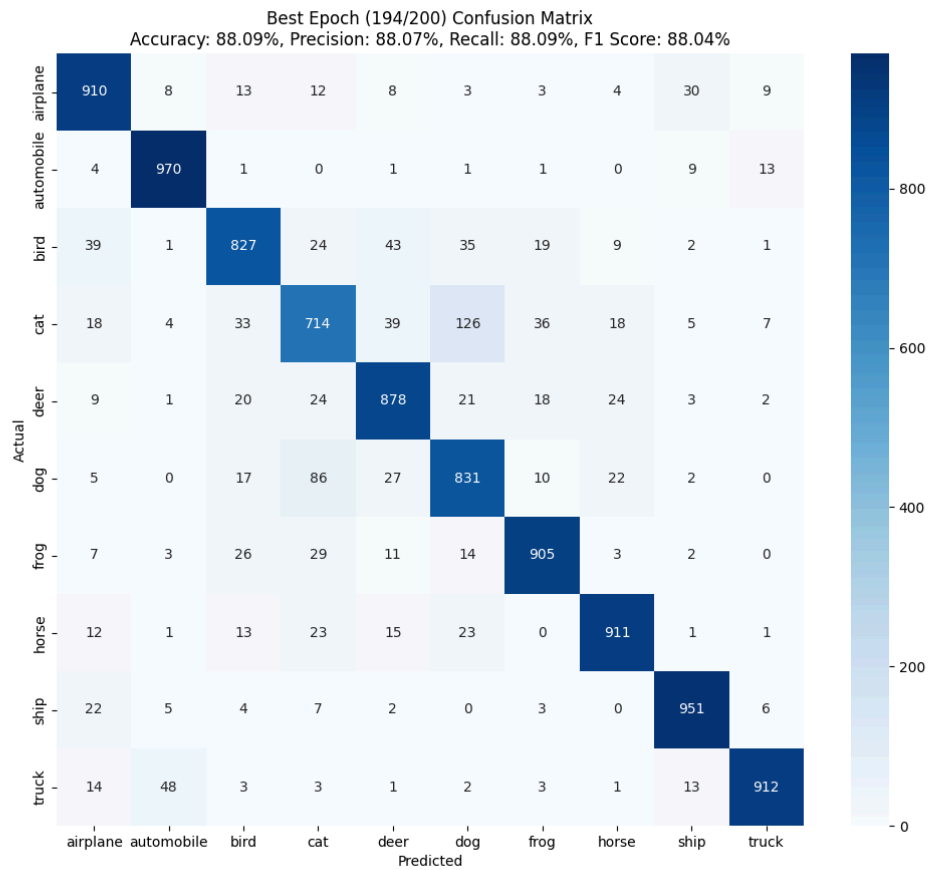
- Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18):**



- **Light ResNet 18:**

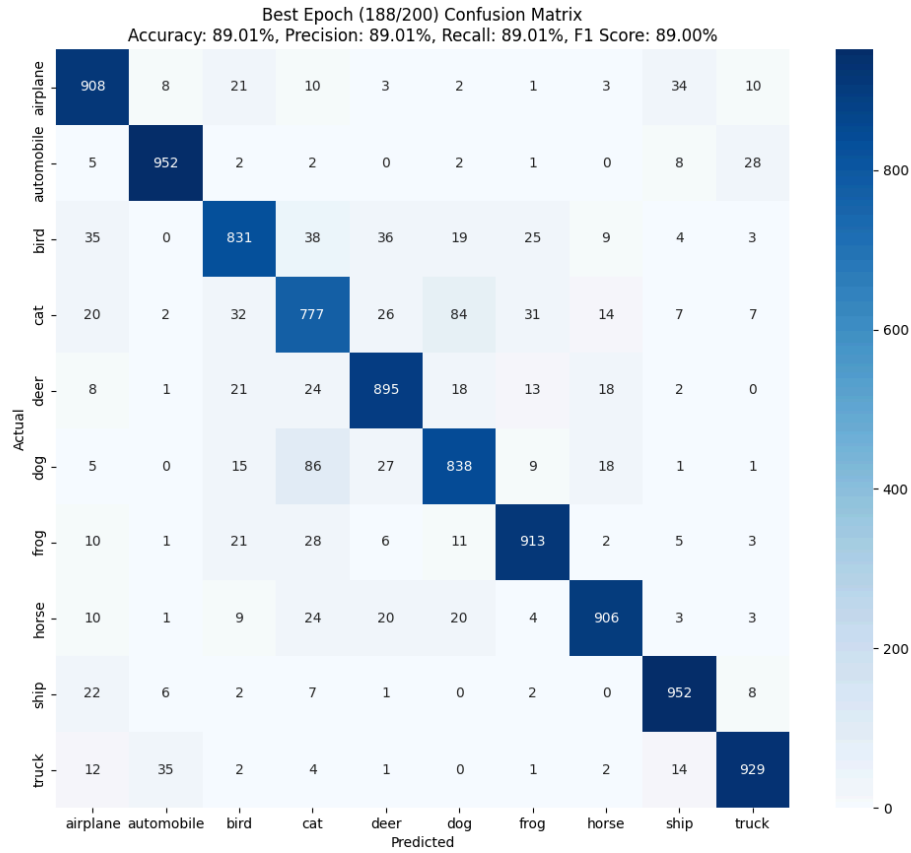


- **Knowledge sonrasi student (teacher: ResNet 18, student: Light ResNet 18):**

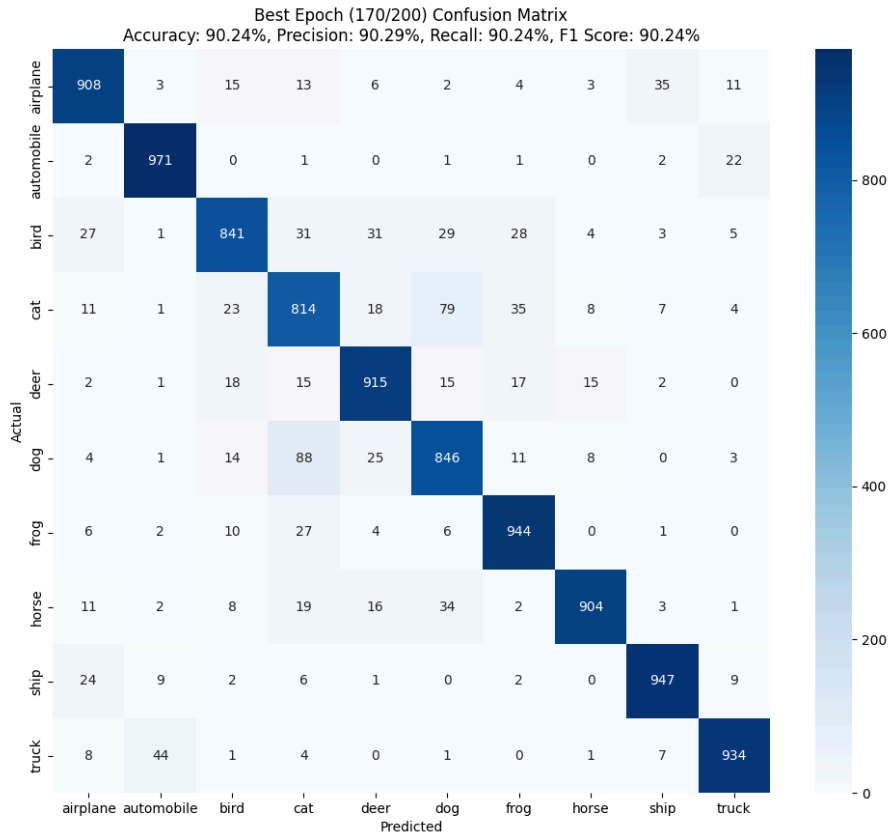


Adam, Batch size=128, lr=0.001 için:

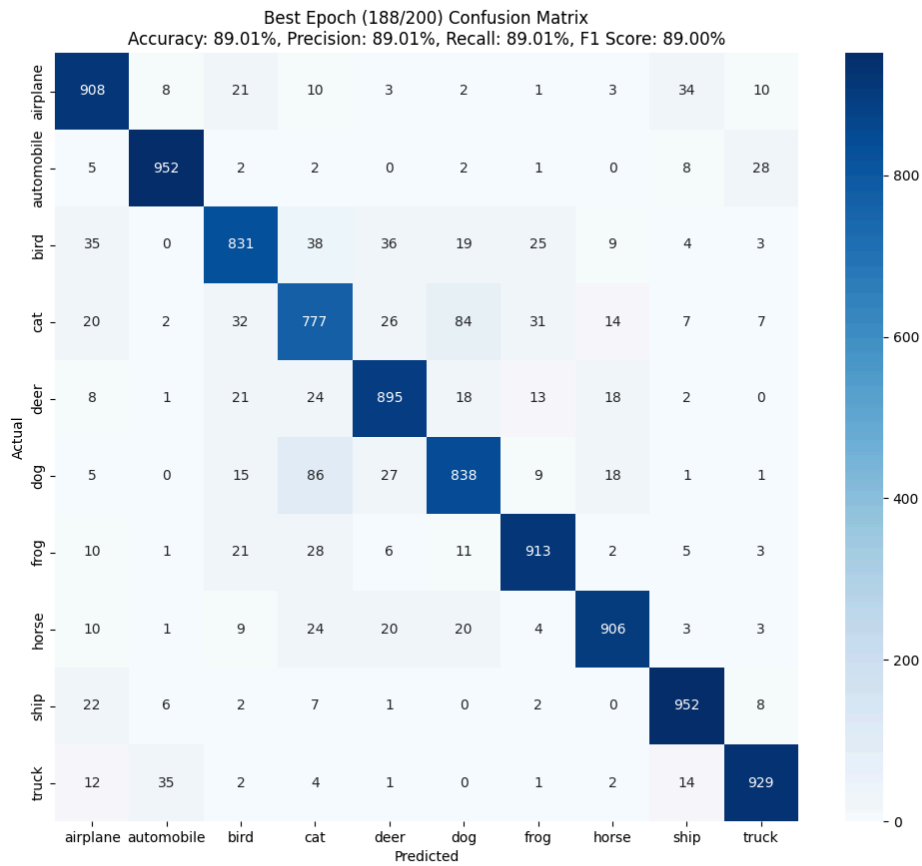
- ResNet 18 (kendi resnetimiz):



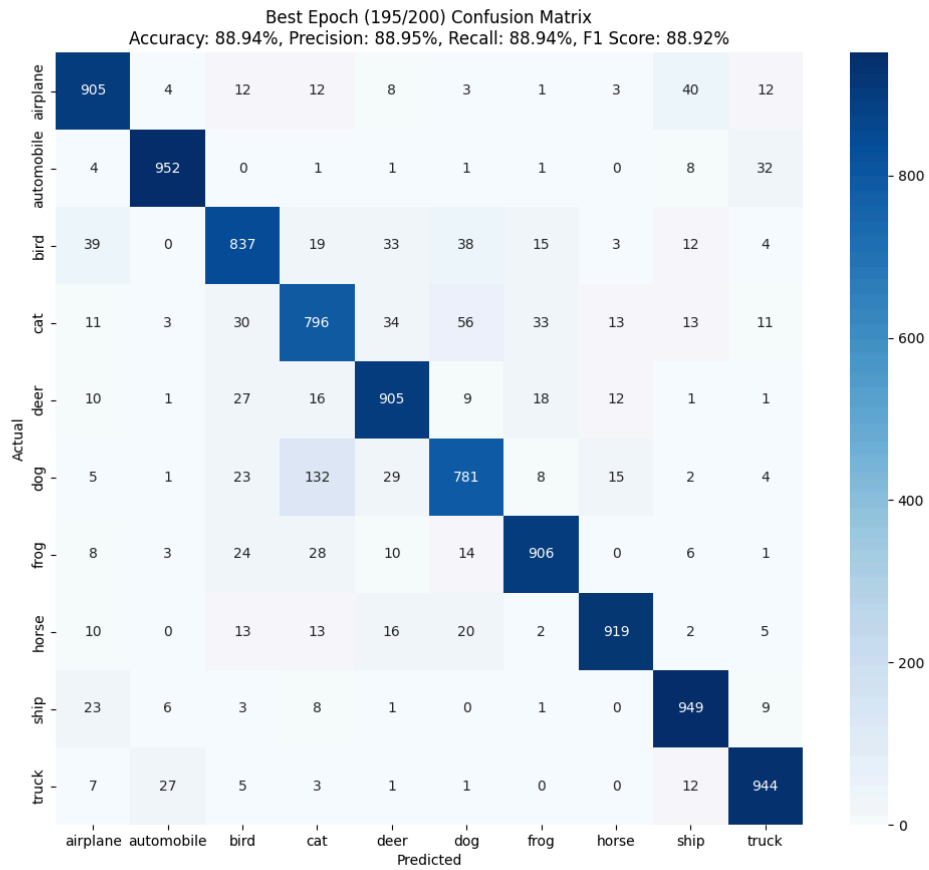
- Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18):



- **Light ResNet 18:**

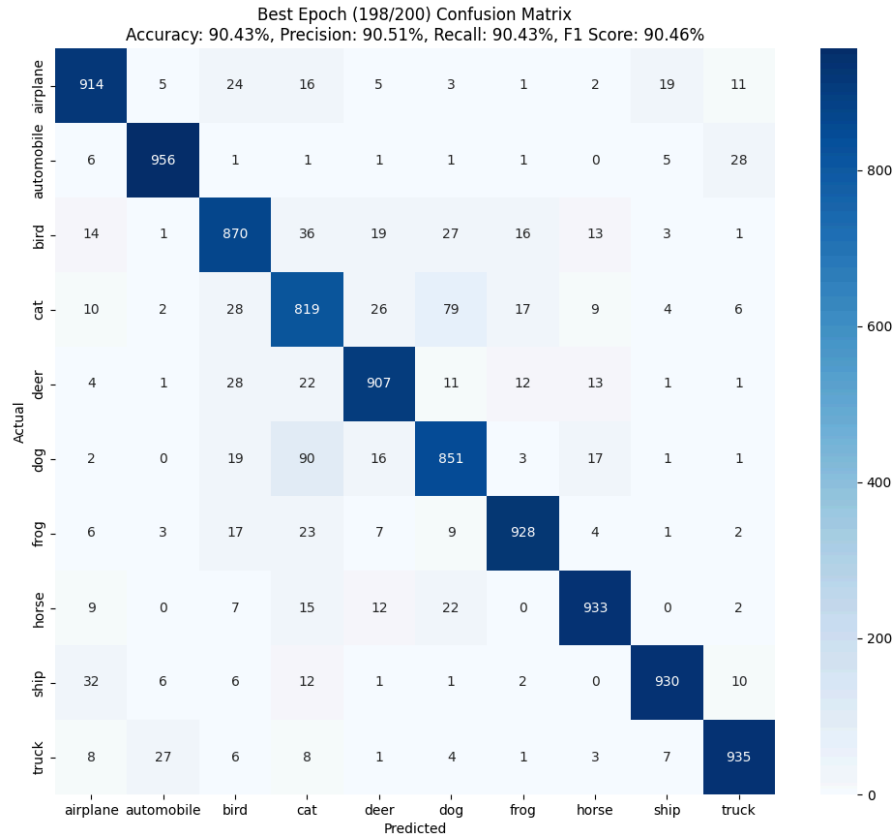


- **Knowledge sonrasi student (teacher: ResNet 18, student: Light ResNet 18):**

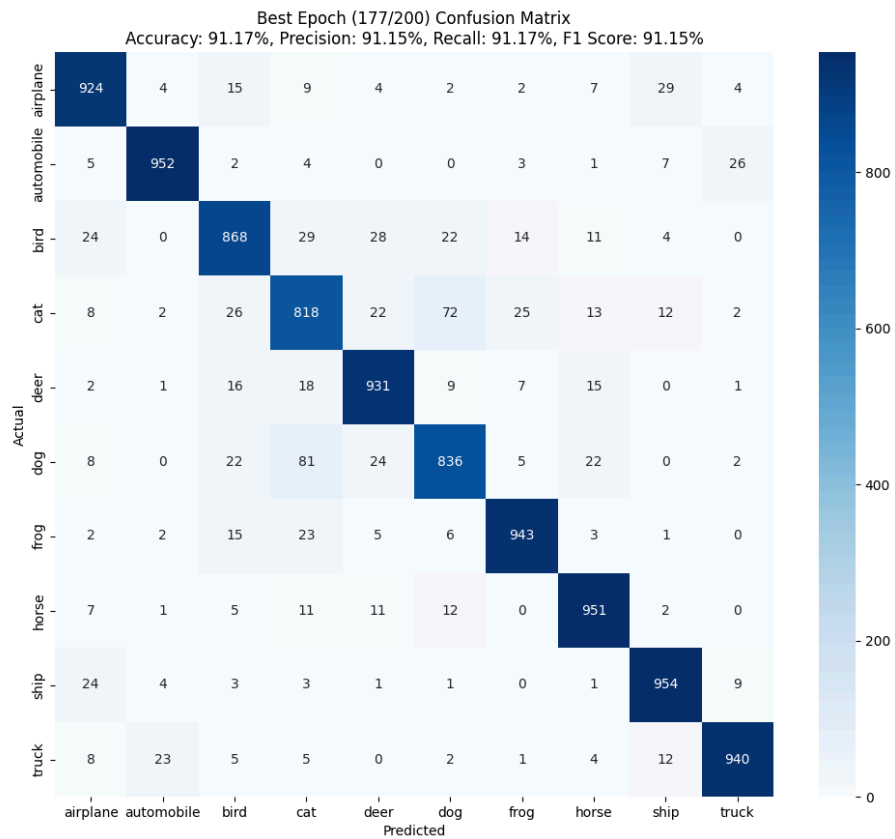


Adam, Batch size=64, lr=0.001 için:

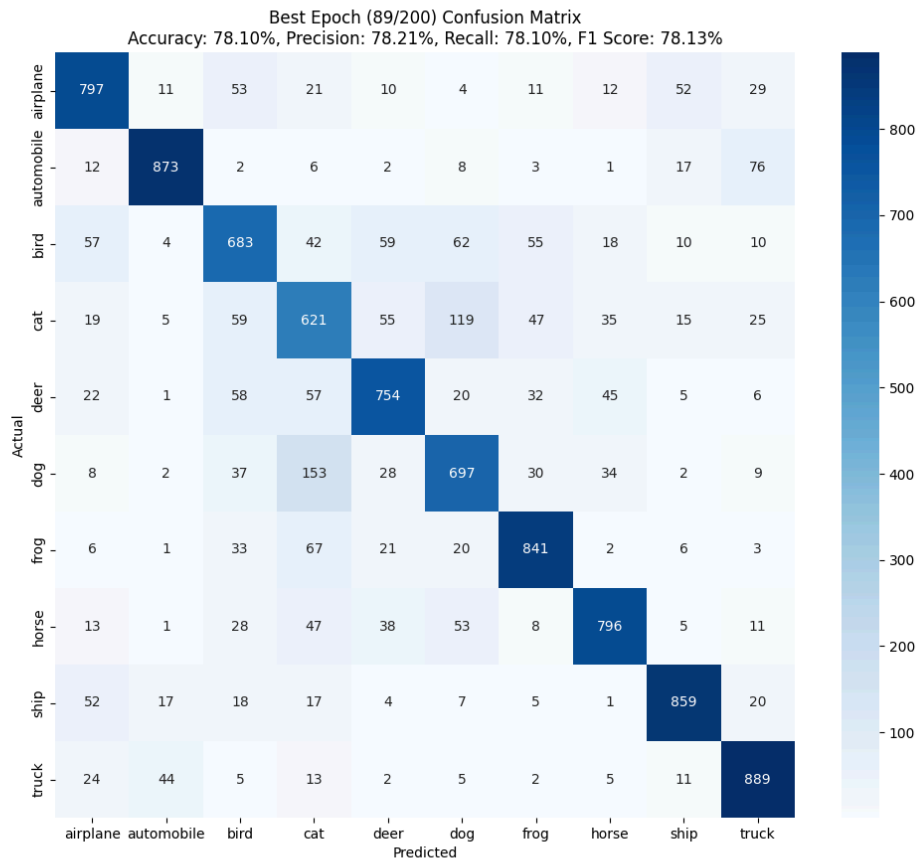
- **ResNet 18 (kendi resnetimiz):**



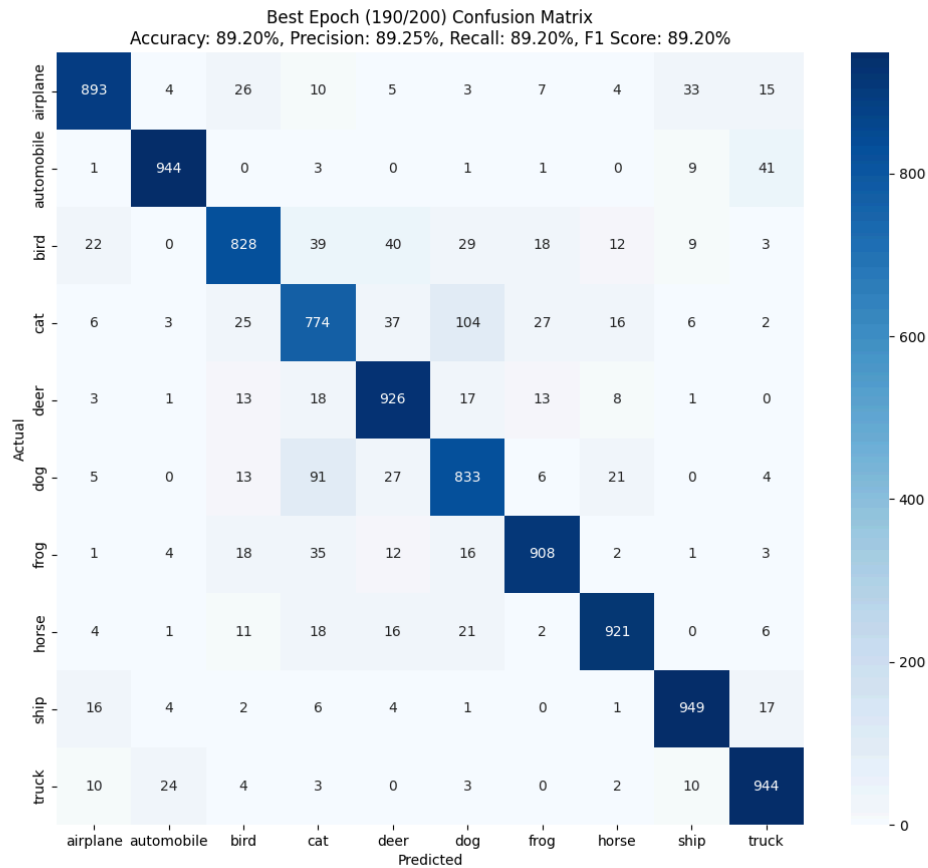
- **Knowledge sonrası student (teacher: ResNet 18, student: ResNet 18):**



- **Light ResNet 18:**



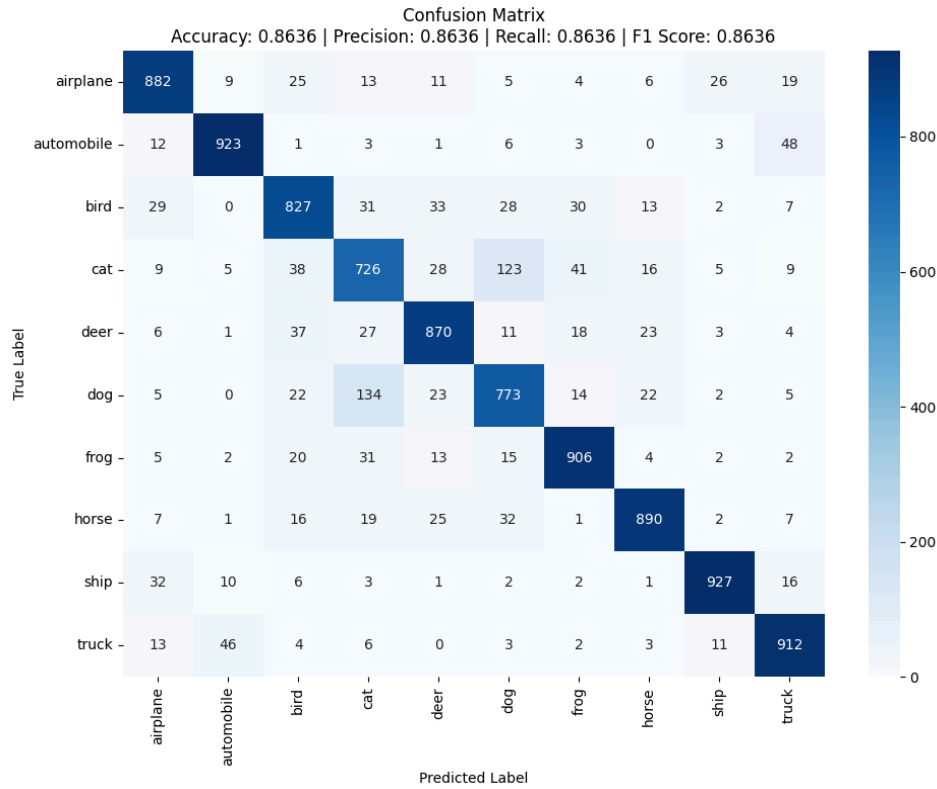
- **Knowledge sonrasi student (teacher: ResNet 18, student: Light ResNet 18):**



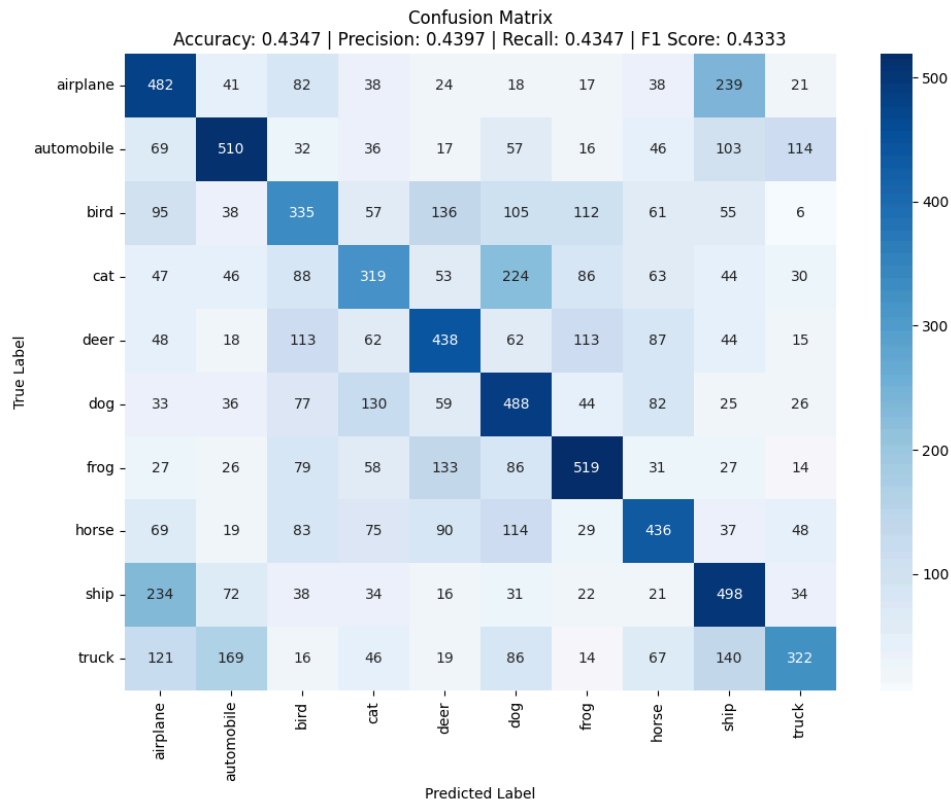
7. Transfer Learning Confusion Matrisler:

Adam, Batch size=128, lr=0.001 için:

- Transfer Learning (2,3,4. katmanlar açık):

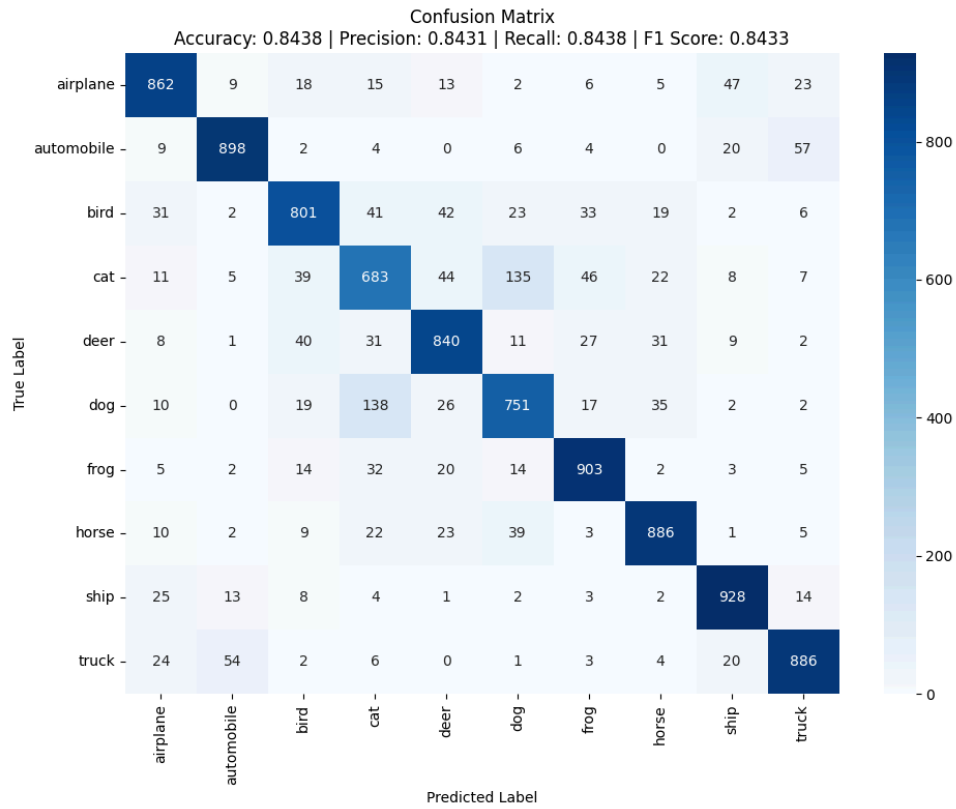


- Transfer Learning (2,3,4. katmanlar kapalı):

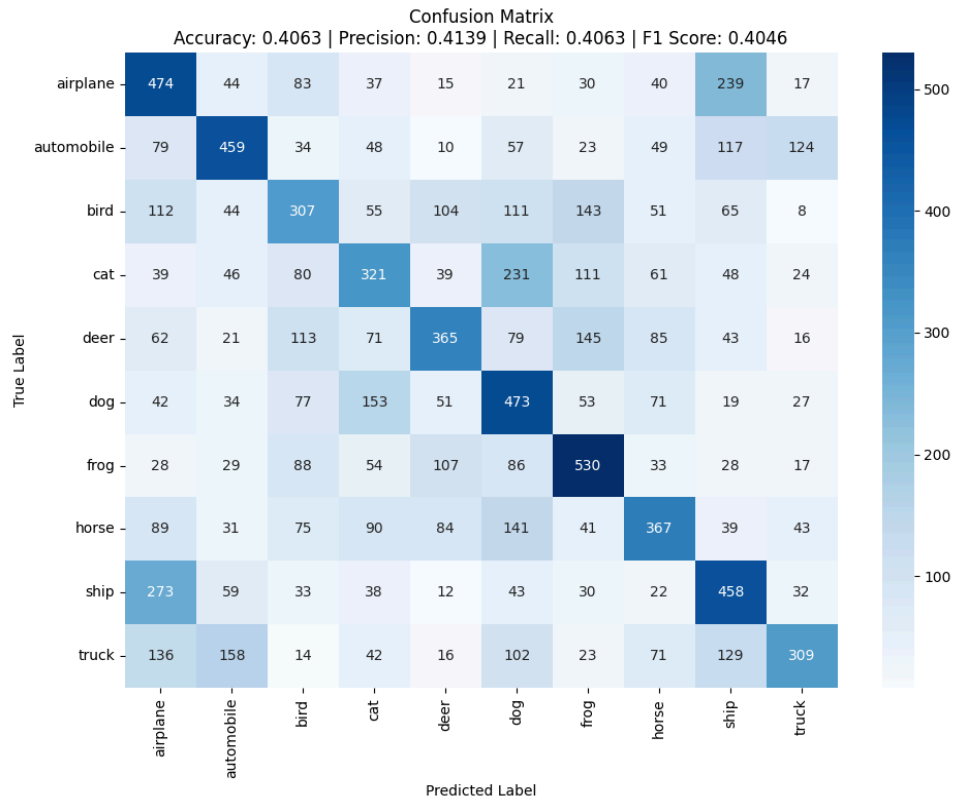


SGD, Batch size=128, lr=0.001 için:

- Transfer Learning (2,3,4. katmanlar açık):

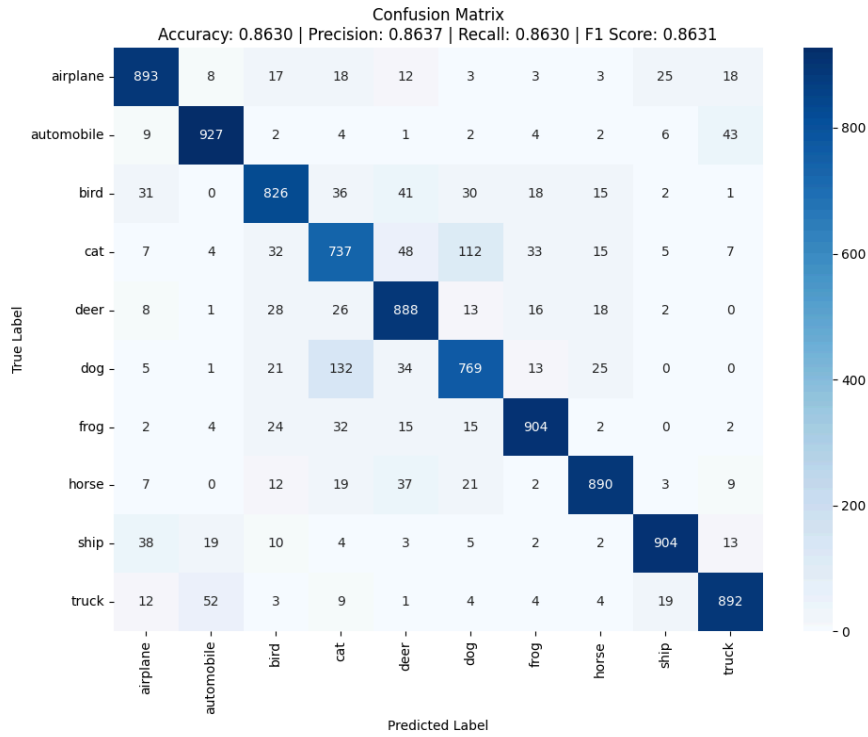


- Transfer Learning (2,3,4. katmanlar kapalı):



Adam, Batch size=64, lr=0.001 için:

- **Transfer Learning (2,3,4. katmanlar açık):**



- **Transfer Learning (2,3,4. katmanlar kapalı):**

