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COEN 166

Attendance 9

1. Bellman Equation:

$$V^*(s) = \max_a \sum_{s'} T(s, a, s') \left[R(s, a, s') + \gamma V^*(s') \right]$$

2. Bellman Update Equation:

$$V_{k+1}(s) \leftarrow \max_a \sum_{s'} T(s, a, s') \left[R(s, a, s') + \gamma V_k(s') \right]$$

3. Policy Extraction Formula:

$$\pi^*(s) = \operatorname*{argmax}_a Q(s, a)$$

$$= \operatorname*{argmax}_a \sum_{s'} T(s, a, s') \times \left[R(s, a, s') + \gamma V^*(s') \right]$$