

HOMEWORK 1		
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Class		DSEB 63
Data 1		
1. Bài toán		Regression (Dự đoán giá nhà)
2. Liệt kê	Input	Diện tích
	Output	Giá nhà
3. Dạng toán		Supervised
Data 2		
1. Bài toán		Classification (Dự đoán/Xác định xem một khách hàng có phải “Target” hay không?)
2. Liệt kê	Input	name_contract_type, code_gender, flag_own_car, flag_own_realty, cnt_children, amt_income_total, amt_credit, amt_annuity, amt_goods_price, name_type_suite, name_income_type, name_education_type, name_family_status, name_housing_type, region_population_relative, days_birth, days_employed, own_car_age, flag_mobil, flag_emp_phone, flag_work_phone, flag_cont_mobile, flag_phone, flag_email, occupation_type, cnt_fam_members, region_rating_client, region_rating_client_w_city, weekday_appr_process_start, hour_appr_process_start, reg_region_not_live_region, reg_region_not_work_region, live_region_not_work_region, reg_city_not_live_city, reg_city_not_work_city, live_city_not_work_city, organization_type, ext_source_1
	Output	Target (0 or 1)
3. Dạng toán		Supervised
Data 3		
1. Bài toán		Clustering
2. Liệt kê	Input	TotalSales, OrderCount, AvgOrderValue
	Output	
3. Dạng toán		Unsupervised
Data 4		
1. Bài toán		Dimensionality reduction
2. Liệt kê	Input	pixel1, pixel2, pixel 3... pixel784, class
	Output	

3. Dạng toán	Unsupervised
<b>Data 5</b>	
1. Dạng toán	Reinforcement Learning
2. Kỹ thuật	<p>Reward: increasing scores Punishment: decreasing score</p> <p>Albert learned to:</p> <ul style="list-style-type: none"> <li>* Room 1: <ul style="list-style-type: none"> <li>- Move in right direction: rewarded based on speed and direction of Albert</li> </ul> </li> <li>* Room 2: <ul style="list-style-type: none"> <li>- Stand: rewarded if foot hit the ground and chest was high enough</li> <li>- Do smoother movement: rewarded if use a strength of almost 0</li> </ul> </li> <li>* Room3: <ul style="list-style-type: none"> <li>- Stand straight: rewarded based on the height of chest (higher chest, more rewarded)</li> </ul> </li> <li>* Room 4: <ul style="list-style-type: none"> <li>- Use both feet: rewarded if the front foot has been in front for less than 2 seconds</li> <li>- Take larger steps: rewarded based on the distance of the step</li> <li>- Reach consistent velocity: rewarded based on the different in his body's velocity from the previous frame to the current frame</li> </ul> </li> <li>* Room 5: <ul style="list-style-type: none"> <li>- Have nicer looking walk: rewarded based on the weight Albert put on his front foot when taking steps.</li> </ul> </li> </ul>