





 <b>Prediction</b>	 <b>Judgment</b>	 <b>Action</b>	 <b>Outcome</b>
<ul style="list-style-type: none"> <li>• Probability of a building or house in a certain borough to have an incident based on socio-demographic factors</li> <li>• Incident risk assessment of houses based on building characteristics (age, size, type)</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of building has a direct effect on fire risk but no data is available to be taken into consideration</li> <li>• Human factors cannot be included in the analysis (careless usage of candles for example)</li> <li>• Renovations and materials used in construction may impact the risk factors</li> </ul>	<ul style="list-style-type: none"> <li>• Use prediction models and data analysis to evaluate property risk based on location and associated demographics</li> <li>• Assist insurance companies to better assess property damage risks</li> <li>• Provide relevant property risk information to real state brokers and buyers</li> </ul>	<ul style="list-style-type: none"> <li>• Lower insurance premiums due to lower property risk</li> <li>• Assist intervention by city officials and firefighters based on predictions</li> </ul>
 <b>Training</b>	 <b>Input</b>		 <b>Feedback</b>
<ul style="list-style-type: none"> <li>• SIM incidents</li> <li>• Census demographics for Montreal boroughs</li> <li>• Household characteristics</li> <li>• 311 incidents</li> <li>• Weather history</li> <li>• Household Geolocation</li> <li>• Fire hydrants data</li> </ul>	<ul style="list-style-type: none"> <li>• SIM incidents</li> <li>• Census demographics for Montreal boroughs</li> <li>• Household characteristics</li> </ul>		<ul style="list-style-type: none"> <li>• Premium reports from insurance companies</li> <li>• Comparison of predicted property risk and actual incidents report</li> <li>• Report from Montreal Fire Dept inspections</li> <li>• Self assessment from landlords</li> </ul>