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In [2]: from numpy import linspace
import matplotlib.pyplot as plt
from pyit2fls import zero_mf, singleton_mf, const_mf, tri_mf, ltri_mf, rtri_mf, \
    trapezoid_mf, gaussian_mf

domain = linspace(0., 1., 1001)

zero = zero_mf(domain)
singleton = singleton_mf(domain, [0.5, 1.])
const = const_mf(domain, [1.])
tri = tri_mf(domain, [0., 0.5, 1., 1.])
ltri = ltri_mf(domain, [0.5, 1., 1.])
rtri = rtri_mf(domain, [0.5, 0., 1.])
trapezoid = trapezoid_mf(domain, [0., 0.25, 0.75, 1., 1.])
gaussian = gaussian_mf(domain, [0.5, 0.1, 1.])

plt.figure()
plt.plot(domain, zero, label="All zero MF")
plt.plot(domain, const, label="Const MF")
plt.grid(True)
plt.legend()
plt.xlabel("Domain")
plt.ylabel("Membership function")
plt.show()

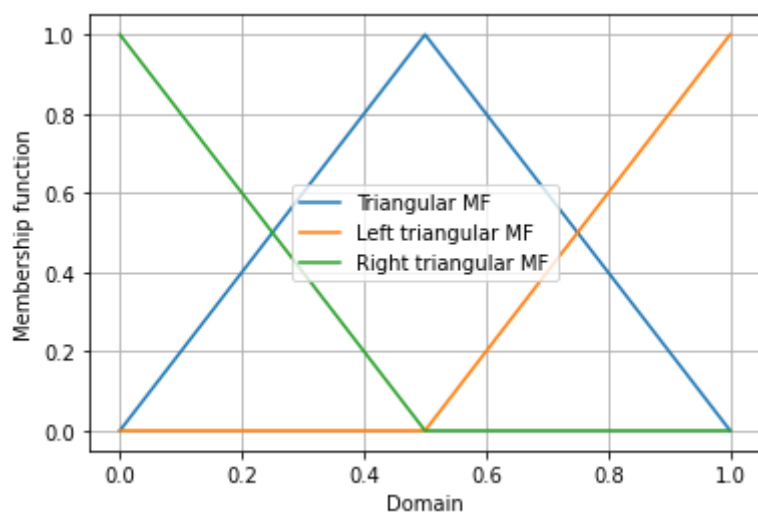
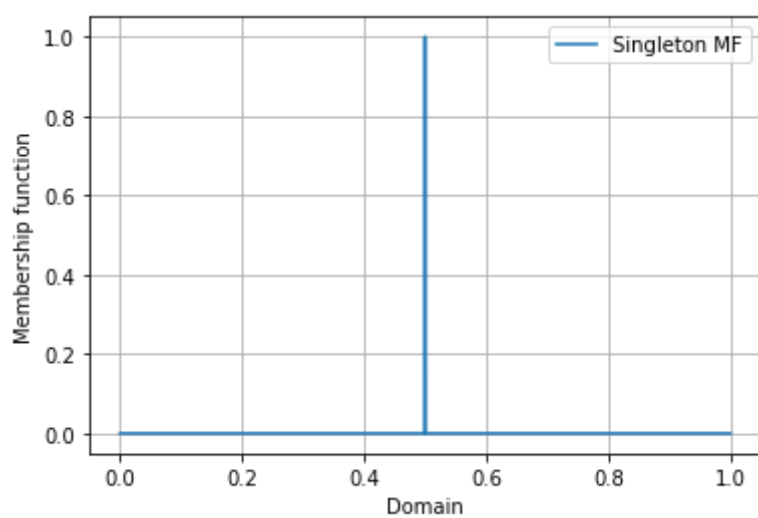
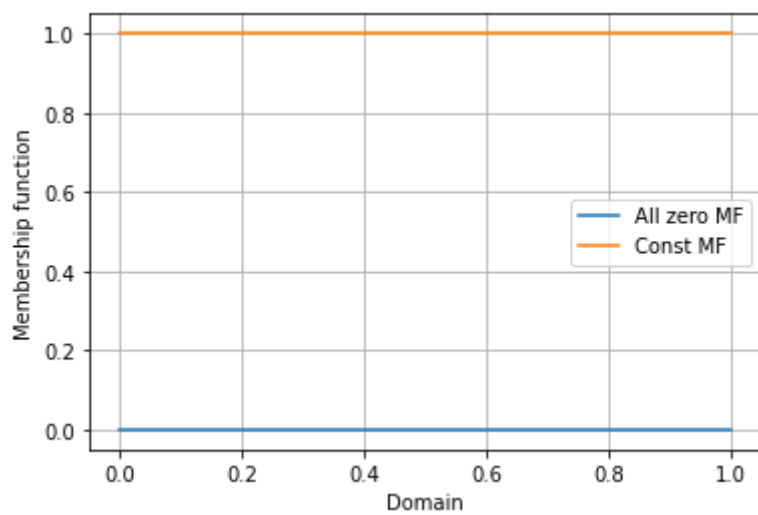
plt.figure()
plt.plot(domain, singleton, label="Singleton MF")
plt.grid(True)
plt.legend()
plt.xlabel("Domain")
plt.ylabel("Membership function")
plt.show()

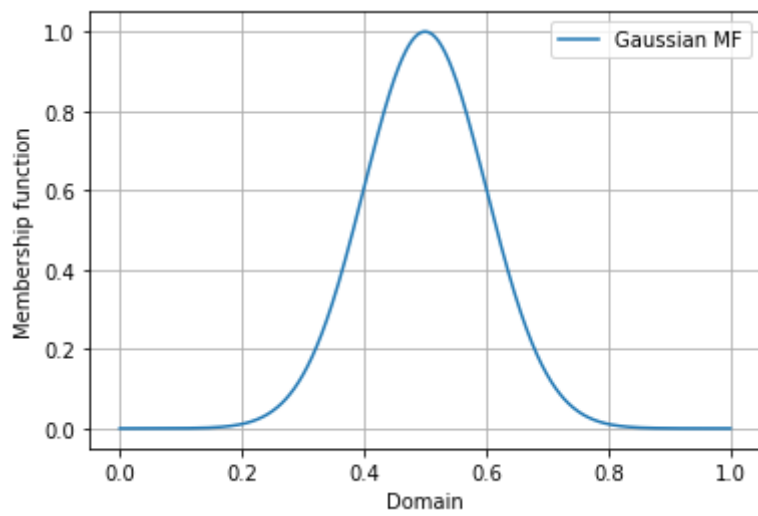
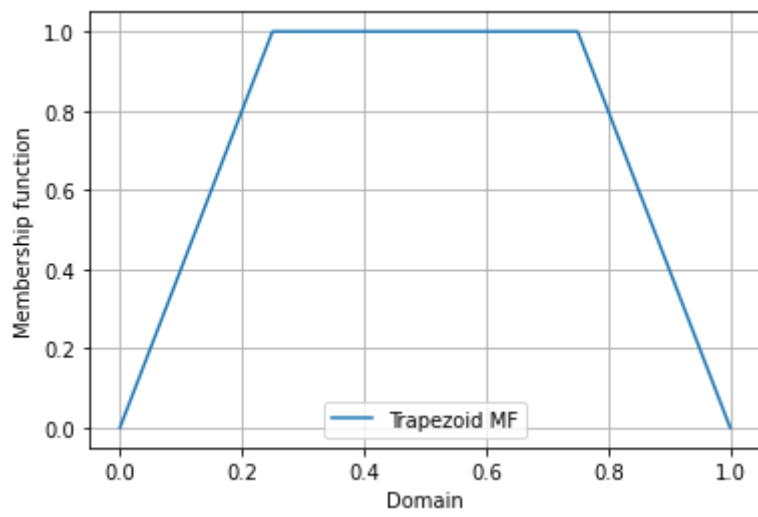
plt.figure()
plt.plot(domain, tri, label="Triangular MF")
plt.plot(domain, ltri, label="Left triangular MF")
plt.plot(domain, rtri, label="Right triangular MF")
plt.grid(True)
plt.legend()
plt.xlabel("Domain")
plt.ylabel("Membership function")
plt.show()

plt.figure()
plt.plot(domain, trapezoid, label="Trapezoid MF")
plt.grid(True)
plt.legend()
plt.xlabel("Domain")
plt.ylabel("Membership function")
plt.show()

plt.figure()
plt.plot(domain, gaussian, label="Gaussian MF")
plt.grid(True)
plt.legend()
plt.xlabel("Domain")
plt.ylabel("Membership function")
plt.show()

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In [ ]:

In [ ]: