**SOLVING THE UNIT TEST ERRORS**

**1) SerializeCellTest (1111,22221,11111,2221)**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeCellTest threw exception: System.FormatException: Input string was not in a correct format.

\***HTMSerializationTests.cs (line 552)**

public void SerializeCellTest(int parentIndx, int colSeq, int cellsPerCol, int cellId)

{

Cell cell = new Cell(12, 14, 16, new CellActivity());

var distSeg1 = new DistalDendrite(cell, 1, 2, 2, 1.0, 100);

cell.DistalDendrites.Add(distSeg1);

var distSeg2 = new DistalDendrite(cell, 44, 24, 34, 1.0, 100);

cell.DistalDendrites.Add(distSeg2);

Cell preSynapticcell = new Cell(11, 14, 16, new CellActivity());

var synapse1 = new Synapse(cell, distSeg1.SegmentIndex, 23, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse1);

var synapse2 = new Synapse(cell, distSeg2.SegmentIndex, 27, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse2);

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeCellTest)}.txt"))

{

cell.SerializeT(sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeCellTest)}.txt"))

{

HtmSerializer ser = new HtmSerializer();

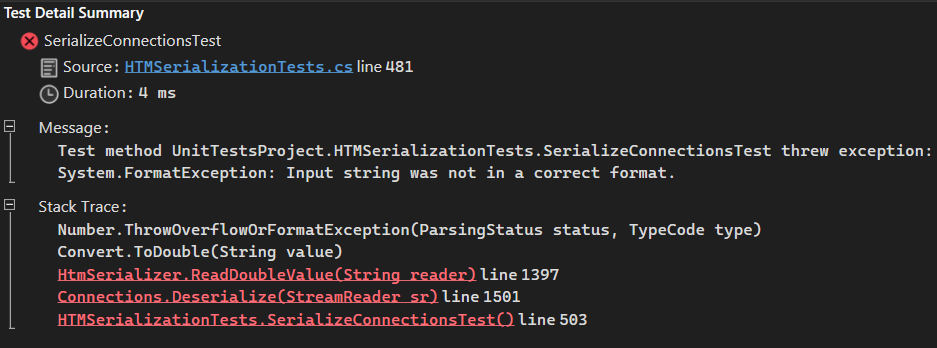
Cell cell1 = ser.DeserializeCell(sr);

Assert.IsTrue(cell1.Equals(cell));

}

}

**2) SerializeConnectionsTest**



**Error message**: Test method UnitTestsProject.HTMSerializationTests.SerializeConnectionsTest threw exception: System.FormatException: Input string was not in a correct format.

\***HTMSerializationTests.cs (line 481)**

public void SerializeConnectionsTest()

{

int[] inputDims = { 3, 4, 5 };

int[] columnDims = { 35, 43, 52 };

HtmConfig cfg = new HtmConfig(inputDims, columnDims);

Connections connections = new Connections(cfg);

Cell cells = new Cell(12, 14, 16, new CellActivity());

var distSeg1 = new DistalDendrite(cells, 1, 2, 2, 1.0, 100);

var distSeg2 = new DistalDendrite(cells, 44, 24, 34, 1.0, 100);

connections.ActiveSegments.Add(distSeg1);

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeConnectionsTest)}.txt"))

{

connections.Serialize(sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeConnectionsTest)}.txt"))

{

Connections connections1 = Connections.Deserialize(sr);

Assert.IsTrue(connections.Equals(connections1));

}

}

**3) SerializeDictionarystringintA**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Assert.IsTrue failed.

**\*HTMSerializationTests.cs (line 368)**

public void SerializeDictionarystringintA()

{

HtmSerializer htm = new HtmSerializer();

Dictionary<String, int[]> keyValues = new Dictionary<String, int[]>

{

{ "Hello", new int[] { 1, 2, 3 } },

{ "GoodMorning", new int[] { 4, 5, 6 } },

{ "Goodevening", new int[] { 7, 8, 9 } }

};

Dictionary<String, int[]> keyValuePairs = new Dictionary<String, int[]>();

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeDictionarystringintA)}.txt"))

{

htm.SerializeBegin("UnitTest", sw);

htm.SerializeValue(keyValues, sw);

htm.SerializeEnd("UnitTest", sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeDictionarystringintA)}.txt"))

{

while (sr.Peek() >= 0)

{

string data = sr.ReadLine();

if (data == String.Empty || data == htm.ReadBegin("UnitTest"))

{

}

else if (data == htm.ReadEnd("UnitTest"))

{

break;

}

else

{

string[] str = data.Split(HtmSerializer.ParameterDelimiter);

for (int i = 0; i < str.Length; i++)

{

switch (i)

{

case 0:

keyValuePairs = htm.ReadDictSIarray(str[i]);

break;

default:

break;

}

}

}

}

}

Assert.IsTrue(keyValuePairs.SequenceEqual(keyValues));

}

**Way to solve 3: This is a mistake caused by punctuation. The decimal number separation sign of each language may be different. In some it is a comma, in others it is a dot. As a solution, it is necessary to turn the computer language into English.**

**4) SerializeDistalDendrite (1,2,2,1,100)**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeDistalDendrite threw exception: System.NullReferenceException: Object reference not set to an instance of an object.

**\* HTMSerializationTests.cs (line 590)**

public void SerializeDistalDendrite(int flatIdx, long lastUsedIteration, int ordinal, double synapsePermConnected, int numInputs)

{

Cell cell = new Cell(12, 14, 16, new CellActivity());

var distSeg1 = new DistalDendrite(cell, 1, 2, 2, 1.0, 100);

cell.DistalDendrites.Add(distSeg1);

var distSeg2 = new DistalDendrite(cell, 44, 24, 34, 1.0, 100);

cell.DistalDendrites.Add(distSeg2);

Cell preSynapticcell = new Cell(11, 14, 16, new CellActivity());

var synapse1 = new Synapse(cell, distSeg1.SegmentIndex, 23, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse1);

var synapse2 = new Synapse(cell, distSeg2.SegmentIndex, 27, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse2);

// Serializes the segment to file.

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeDistalDendrite)}.txt"))

{

distSeg1.Serialize(sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeDistalDendrite)}.txt"))

{

HtmSerializer ser = new HtmSerializer();

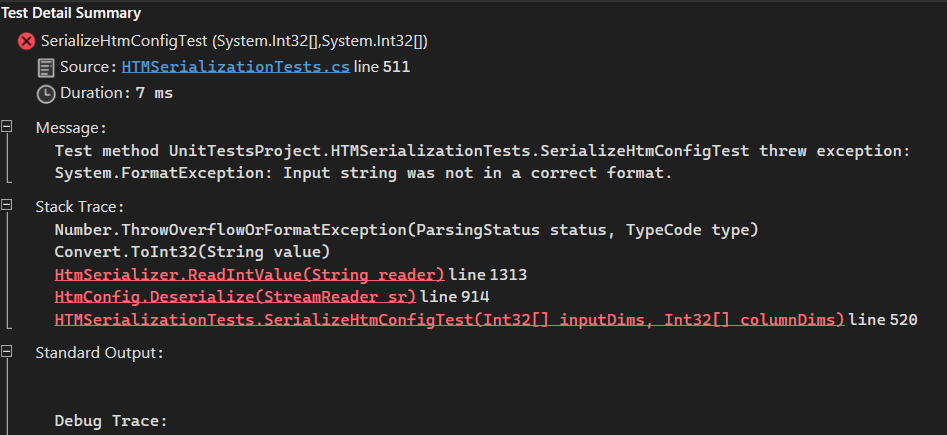
DistalDendrite distSegment1 = ser.DeserializeDistalDendrite(sr);

Assert.IsTrue(distSegment1.Equals(distSeg1));

}

}

**5) SerializeHtmConfigTest (System.Int32[], System.Int32[])**



**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeHtmConfigTest threw exception: System.FormatException: Input string was not in a correct format.

**\* HTMSerializationTests.cs (line 511)**

public void SerializeHtmConfigTest(int[] inputDims, int[] columnDims)

{

HtmConfig matrix = new HtmConfig(inputDims, columnDims);

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeHtmConfigTest)}.txt"))

{

matrix.Serialize(sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeHtmConfigTest)}.txt"))

{

HtmConfig matrix1 = HtmConfig.Deserialize(sr);

Assert.IsTrue(matrix.Equals(matrix1));

}

}

**6) SerializeInMemoryDistributedDictionary**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeInMemoryDistributedDictionary threw exception: System.FormatException: Input string was not in a correct format.

**\* HTMSerializationTests.cs (line 879)**

public void SerializeInMemoryDistributedDictionary()

{

InMemoryDistributedDictionary<int, int> numNodes = new InMemoryDistributedDictionary<int, int>(3);

// There are no Serialize of Dictionary in InMemoryDistributedDictionary

numNodes.Add(145, 29);

numNodes.Add(123, 26);

numNodes.Add(531, 26);

numNodes.Add(1536, 26);

numNodes.Add(1529, 26);

// Serialize

using (StreamWriter sw = new StreamWriter("InMem.txt"))

{

numNodes.Serialize(sw);

}

// Deserialize

InMemoryDistributedDictionary<int, int> newTest = new InMemoryDistributedDictionary<int, int>();

using (StreamReader sr = new StreamReader("InMem.txt"))

{

newTest = InMemoryDistributedDictionary<int, int>.Deserialize(sr);

HtmSerializer.IsEqual(numNodes, newTest);

}

}

**7) SerializeProximalDendriteTest (0,12,34,23)**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeProximalDendriteTest threw exception: System.FormatException: Input string was not in a correct format.

**\* HTMSerializationTests.cs (line 721)**

public void SerializeProximalDendriteTest(int colIndx, double synapsePermConnected, int numInputs)

{

ProximalDendrite proximal = new ProximalDendrite(colIndx, synapsePermConnected, numInputs);

var rfPool = new Pool(1, 28);

Cell cell = new Cell(12, 14, 16, new CellActivity());

var distSeg1 = new DistalDendrite(cell, 1, 2, 2, 1.0, 100);

cell.DistalDendrites.Add(distSeg1);

var distSeg2 = new DistalDendrite(cell, 44, 24, 34, 1.0, 100);

cell.DistalDendrites.Add(distSeg2);

Cell preSynapticcell = new Cell(11, 14, 16, new CellActivity());

var synapse1 = new Synapse(cell, distSeg1.SegmentIndex, 23, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse1);

var synapse2 = new Synapse(cell, distSeg2.SegmentIndex, 27, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse2);

rfPool.m\_SynapsesBySourceIndex = new Dictionary<int, Synapse>();

rfPool.m\_SynapsesBySourceIndex.Add(3, synapse1);

rfPool.m\_SynapsesBySourceIndex.Add(67, synapse2);

proximal.RFPool = rfPool;

//HtmSerializer2 htm = new HtmSerializer2();

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeProximalDendriteTest)}.txt"))

{

proximal.Serialize(sw);

}

//htm.indent($"ser\_{nameof(SerializeProximalDendriteTest)}.txt");

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeProximalDendriteTest)}.txt"))

{

ProximalDendrite proximal1 = ProximalDendrite.Deserialize(sr);

Assert.IsTrue(proximal.Equals(proximal1));

}

}

**8) SerializeSparseBinaryMatrix**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeSparseBinaryMatrix threw exception: System.FormatException: Input string was not in a correct format.

**\* HTMSerializationTests.cs (line 904)**

public void SerializeSparseBinaryMatrix()

{

// Create SParse BinarySparseMatrix

// either by dicrect creation or running experiment

int[] dimensions = { 100, 100 };

//IDistributedDictionary<int, int[]> dict = new();

SparseBinaryMatrix binaryMatrix = new(dimensions, false);

// Serialize

using (StreamWriter sw = new StreamWriter("Binary.txt"))

{

binaryMatrix.Serialize(sw);

}

// Deserizlize

SparseBinaryMatrix newBinary = new();

using (StreamReader sr = new StreamReader("Binary.txt"))

{

newBinary = SparseBinaryMatrix.Deserialize(sr);

HtmSerializer.IsEqual(binaryMatrix, newBinary);

}

}

**9) SerializeSynapseTest (13,87,22,45)**

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializeSynapseTest threw exception: System.FormatException: Input string was not in a correct format.

**\* HTMSerializationTests.cs (line 631)**

public void SerializeSynapseTest(int segmentindex, int synapseindex, double permanence)

{

Cell cell = new Cell(12, 14, 16, new CellActivity());

var distSeg1 = new DistalDendrite(cell, 1, 2, 2, 1.0, 100);

cell.DistalDendrites.Add(distSeg1);

var distSeg2 = new DistalDendrite(cell, 44, 24, 34, 1.0, 100);

cell.DistalDendrites.Add(distSeg2);

Cell preSynapticcell = new Cell(11, 14, 16, new CellActivity());

var synapse1 = new Synapse(cell, distSeg1.SegmentIndex, 23, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse1);

var synapse2 = new Synapse(cell, distSeg2.SegmentIndex, 27, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse2);

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializeSynapseTest)}.txt"))

{

synapse1.Serialize(sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializeSynapseTest)}.txt"))

{

HtmSerializer ser = new HtmSerializer();

Synapse synapseT1 = ser.DeserializeSynapse(sr);

Assert.IsTrue(synapse1.Equals(synapseT1));

}

}

**10) Serialize Pool Test (3) – (group error)**

a) SerializePoolTest (0,34)

b) SerializePoolTest (1,28)

c) SerializePoolTest (1000,3426)

metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Error message:** Test method UnitTestsProject.HTMSerializationTests.SerializePoolTest threw exception: System.FormatException: Input string was not in a correct format.

- Error is same in a,b,c.

**\* HTMSerializationTests.cs (line 674)**

public void SerializePoolTest(int size, int numInputs)

{

Pool pool = new Pool(size, numInputs);

//pool.m\_SynapseConnections = new List<int>();

//pool.m\_SynapseConnections.Add(34);

//pool.m\_SynapseConnections.Add(87);

//pool.m\_SynapseConnections.Add(44);

Cell cell = new Cell(12, 14, 16, new CellActivity());

var distSeg1 = new DistalDendrite(cell, 1, 2, 3, 1.0, 100);

cell.DistalDendrites.Add(distSeg1);

var distSeg2 = new DistalDendrite(cell, 44, 24, 4, 1.0, 100);

cell.DistalDendrites.Add(distSeg2);

Cell preSynapticcell = new Cell(11, 14, 16, new CellActivity());

var synapse1 = new Synapse(cell, distSeg1.SegmentIndex, 23, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse1);

var synapse2 = new Synapse(cell, distSeg2.SegmentIndex, 27, 1.0);

preSynapticcell.ReceptorSynapses.Add(synapse2);

pool.m\_SynapsesBySourceIndex = new Dictionary<int, Synapse>();

pool.m\_SynapsesBySourceIndex.Add(3, synapse1);

pool.m\_SynapsesBySourceIndex.Add(67, synapse2);

using (StreamWriter sw = new StreamWriter($"ser\_{nameof(SerializePoolTest)}.txt"))

{

pool.Serialize(sw);

}

using (StreamReader sr = new StreamReader($"ser\_{nameof(SerializePoolTest)}.txt"))

{

Pool pool1 = Pool.Deserialize(sr);

Assert.IsTrue(pool1.Equals(pool));

}

}

---**Final note: We need to solve these unit test errors for our code to work. We're working on these.**