Quantum-Enhanced Federated B2B Intelligence Network

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Quantum-Federated B2B Network Prototype</title>

<script src="https://cdn.jsdelivr.net/npm/chart.js"></script>

<style>

body { font-family:'Segoe UI',sans-serif; background:#f4f6f8; margin:0; padding:0; }

.container { max-width:1200px; margin:30px auto; background:#fff; padding:20px; border-radius:12px; box-shadow:0 5px 20px rgba(0,0,0,0.1);}

.header { text-align:center; margin-bottom:30px;}

.header h1 { background:linear-gradient(90deg,#1e3c72,#2a5298); -webkit-background-clip:text; -webkit-text-fill-color:transparent;}

.section-title { text-align:center; margin:20px 0; font-size:1.5rem; }

.metrics { display:flex; gap:15px; justify-content:center; flex-wrap:wrap;}

.metric-card { background:linear-gradient(135deg,#1e3c72,#2a5298); color:#fff; padding:20px; border-radius:10px; width:180px; text-align:center; }

.flow-diagram { display:flex; justify-content:space-around; flex-wrap:wrap; margin:20px 0; }

.flow-step { background:#74b9ff; color:#fff; padding:15px; border-radius:10px; min-width:150px; margin:5px; text-align:center;}

.recommendations { display:flex; gap:15px; flex-wrap:wrap; justify-content:center; }

.rec-card { background:#f7f9fc; padding:15px; border-radius:10px; width:180px; box-shadow:0 3px 10px rgba(0,0,0,0.1); }

.rec-card h4 { margin-bottom:5px; }

.chart-container { width:100%; max-width:600px; margin:0 auto 30px auto; }

</style>

</head>

<body>

<div class="container">

<div class="header">

<h1>⚛ Quantum-Federated B2B Intelligence Network</h1>

<p>Live Prototype Simulation</p>

</div>

<!-- Metrics -->

<h2 class="section-title">System Metrics</h2>

<div class="metrics">

<div class="metric-card"><h3 id="accuracy">92%</h3><p>Recommendation Accuracy</p></div>

<div class="metric-card"><h3 id="latency">&lt;200ms</h3><p>Insight Latency</p></div>

<div class="metric-card"><h3 id="privacy">100%</h3><p>Data Privacy</p></div>

<div class="metric-card"><h3 id="blockchain">Immutable</h3><p>Blockchain Logs</p></div>

</div>

<!-- Flow Diagram -->

<h2 class="section-title">Data & Model Flow</h2>

<div class="flow-diagram">

<div class="flow-step">Local Training</div>

<div class="flow-step">Federated Aggregation</div>

<div class="flow-step">Quantum Enhancement</div>

<div class="flow-step">Blockchain Validation</div>

<div class="flow-step">Recommendations</div>

</div>

<!-- Chart -->

<h2 class="section-title">Training Progress</h2>

<div class="chart-container">

<canvas id="trainingChart"></canvas>

</div>

<!-- Recommendations -->

<h2 class="section-title">Live Recommendations</h2>

<div class="recommendations" id="recommendations">

<!-- JS will inject cards here -->

</div>

</div>

<script>

// Chart.js Training Simulation

const ctx = document.getElementById('trainingChart').getContext('2d');

const trainingChart = new Chart(ctx, {

type: 'line',

data: {

labels: Array.from({length:10},(\_,i)=>'Round '+(i+1)),

datasets: [{

label: 'Loss',

data: [0.8,0.65,0.55,0.45,0.38,0.32,0.28,0.25,0.22,0.2],

borderColor:'#1e3c72',

backgroundColor:'rgba(30,60,114,0.2)',

tension:0.3

}]

},

options: {

responsive:true,

plugins:{legend:{display:false}},

scales:{

y:{beginAtZero:true,max:1},

x:{grid:{display:false}}

}

}

});

// Live Recommendations Simulation

const recommendations = [

{name:'Mango Juice',reason:'Popular in South zone',confidence:'92%'},

{name:'LED Display',reason:'High demand SME trend',confidence:'88%'},

{name:'Organic Honey',reason:'Retailer pattern match',confidence:'90%'},

{name:'Smart Sensors',reason:'New product discovery',confidence:'85%'}

];

const recContainer = document.getElementById('recommendations');

recommendations.forEach(rec=>{

const card = document.createElement('div');

card.className='rec-card';

card.innerHTML=<h4>${rec.name}</h4><p>${rec.reason}</p><p>Confidence: ${rec.confidence}</p>;

recContainer.appendChild(card);

});

// Simulate metric updates

let acc=92;

setInterval(()=>{

acc = Math.min(95, acc + Math.random()\*0.3);

document.getElementById('accuracy').innerText=acc.toFixed(1)+'%';

},2000);

</script>

</body>

</html>