<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8" />

<meta name="viewport" content="width=device-width, initial-scale=1" />

<title>Sentiment Analysis — Customer Reviews</title>

<style>

:root{

--bg:#0f172a; /\* slate-900 \*/

--panel:#111827; /\* gray-900 \*/

--muted:#94a3b8; /\* slate-400 \*/

--text:#e5e7eb; /\* gray-200 \*/

--accent:#22d3ee; /\* cyan-400 \*/

--pos:#16a34a; /\* green-600 \*/

--neg:#dc2626; /\* red-600 \*/

--neu:#71717a; /\* zinc-500 \*/

--card:#0b1220;

--chip:#1f2937;

--shadow: 0 10px 30px rgba(0,0,0,.35);

--radius: 16px;

}

\*{box-sizing:border-box}

body{

margin:0;background:radial-gradient(1200px 600px at 10% -10%, #0b1220, transparent),

radial-gradient(1000px 600px at 120% 0%, #0a1120, transparent),

var(--bg);

color:var(--text); font:500 16px/1.5 system-ui,Segoe UI, Roboto, Helvetica, Arial, sans-serif;

}

header{

padding:24px 20px 10px; text-align:center;

}

h1{

margin:0; font-size: clamp(22px, 3.5vw, 36px);

letter-spacing:.3px;

background: linear-gradient(90deg, #60a5fa, #22d3ee, #34d399);

-webkit-background-clip:text; background-clip:text; color: transparent;

}

.sub{color:var(--muted); margin-top:6px}

.wrap{max-width:1100px; margin:24px auto 60px; padding:0 16px}

.panel{

background:linear-gradient(180deg, #0d1627, #0c1322);

border:1px solid #1e293b; border-radius:var(--radius); box-shadow:var(--shadow);

padding:18px;

}

.grid{display:grid; gap:16px}

@media (min-width: 850px){ .grid{ grid-template-columns: 1.2fr .8fr } }

textarea{

width:100%; min-height:200px; resize:vertical; border:1px solid #1f2937;

background:#0a1020; color:var(--text); border-radius:14px; padding:14px 14px 44px;

outline:none; box-shadow: inset 0 0 0 1px transparent; transition:.2s;

}

textarea:focus{ box-shadow: inset 0 0 0 1px var(--accent); border-color:#164e63 }

.hint{color:var(--muted); font-size:13px; margin-top:8px}

.toolbar{display:flex; gap:8px; flex-wrap:wrap; margin-top:10px}

button{

appearance:none; border:1px solid #1f2937; background:#0d172a; color:var(--text);

padding:10px 14px; border-radius:12px; cursor:pointer; transition:.18s transform;

box-shadow: 0 6px 14px rgba(0,0,0,.25);

}

button:hover{ transform: translateY(-1px); border-color:#28445f }

button.primary{ background:linear-gradient(90deg,#22d3ee,#34d399); color:#04101a; border-color:transparent; font-weight:700 }

button.ghost{ background:#0a0f1f }

.chips{display:flex; gap:8px; flex-wrap:wrap; margin-top:8px}

.chip{

background:var(--chip); border:1px solid #263142; color:#cbd5e1; padding:6px 10px; border-radius:999px;

font-size:12px

}

.stats{

display:grid; grid-template-columns: repeat(3, 1fr); gap:10px; margin-top:10px

}

.stat{

background:var(--card); border:1px solid #1f2937; border-radius:14px; padding:12px; text-align:center

}

.stat .k{ font-size:24px; font-weight:800 }

.stat.pos .k{ color:var(--pos) }

.stat.neg .k{ color:var(--neg) }

.stat.neu .k{ color:var(--neu) }

table{ width:100%; border-collapse: collapse; margin-top:14px }

th, td{ border-bottom:1px solid #1f2937; padding:12px 10px; vertical-align:top; }

th{ text-align:left; color:#a5b4fc; font-weight:700; position:sticky; top:0; background:#0c1322 }

.pill{ display:inline-flex; align-items:center; gap:6px; padding:4px 10px; border-radius:999px; font-size:12px; font-weight:700 }

.pill.pos{ background: rgba(22,163,74,.15); color:#22c55e; border:1px solid rgba(22,163,74,.4) }

.pill.neg{ background: rgba(220,38,38,.15); color:#f87171; border:1px solid rgba(220,38,38,.4) }

.pill.neu{ background: rgba(113,113,122,.15); color:#a1a1aa; border:1px solid rgba(113,113,122,.35) }

.hl.pos{ background: rgba(34,197,94,.18); box-shadow: inset 0 0 0 1px rgba(34,197,94,.5); border-radius:6px; padding:1px 3px }

.hl.neg{ background: rgba(239,68,68,.18); box-shadow: inset 0 0 0 1px rgba(239,68,68,.5); border-radius:6px; padding:1px 3px }

.score{ font-family: ui-monospace, SFMono-Regular, Menlo, Consolas, monospace }

.stars{ letter-spacing:2px; font-size:14px }

.footer{ color:var(--muted); margin-top:8px; font-size:12px }

canvas{ width:100%; height:220px; background:#0a1020; border:1px solid #1f2937; border-radius:12px }

</style>

</head>

<body>

<header>

<h1>Sentiment Analysis of Customer Reviews</h1>

<div class="sub">Paste reviews (one per line) → Analyze → See scores, labels, highlights & summary</div>

</header>

<div class="wrap grid">

<section class="panel">

<label for="input"><strong>Reviews</strong></label>

<textarea id="input" placeholder="Example:

I absolutely love this product! Shipping was fast 😀

The support team is not helpful and the quality is terrible.

Price is okay, nothing special."></textarea>

<div class="toolbar">

<button class="primary" id="analyzeBtn">Analyze Reviews</button>

<button class="ghost" id="sampleBtn">Insert Sample</button>

<button class="ghost" id="clearBtn">Clear</button>

</div>

<div class="chips" id="legend">

<span class="chip">Negation aware (e.g., “not good”)</span>

<span class="chip">Intensifiers (very, really, extremely)</span>

<span class="chip">Diminishers (slightly, somewhat)</span>

<span class="chip">Emoji aware (😀 😡 👍 👎 😍 😢 🤬)</span>

</div>

<div class="hint">Tip: Put each customer review on a new line. Empty lines are ignored.</div>

<div class="stats">

<div class="stat pos"><div>Positive</div><div class="k" id="posCount">0</div></div>

<div class="stat neu"><div>Neutral</div><div class="k" id="neuCount">0</div></div>

<div class="stat neg"><div>Negative</div><div class="k" id="negCount">0</div></div>

</div>

<div style="margin-top:10px">

<canvas id="barChart" width="600" height="220" aria-label="Sentiment distribution chart"></canvas>

</div>

</section>

<section class="panel" style="overflow:auto; max-height:70vh">

<table id="resultsTable" aria-label="Per-review results">

<thead>

<tr>

<th style="width:45%">Review (highlights)</th>

<th>Label</th>

<th>Score</th>

<th>Stars</th>

</tr>

</thead>

<tbody id="tbody">

<tr><td colspan="4" style="color:var(--muted)">No results yet. Paste reviews and click <em>Analyze Reviews</em>.</td></tr>

</tbody>

</table>

<div class="footer">Scoring: &lt;-∞ negative … 0 neutral … positive ∞-&gt;. Labels are based on thresholds (≤ -0.5 = Negative, ≥ 0.5 = Positive, otherwise Neutral).</div>

</section>

</div>

<script>

/\* -----------------------------

Tiny Sentiment Engine (client-side)

- Lexicon-based (weighted)

- Negation / Intensifiers / Diminishers / Emojis

---------------------------------- \*/

// Base lexicon (subset; add more as needed)

const LEXICON = {

"good": 2, "great": 3, "excellent": 3.5, "amazing": 3.5, "awesome": 3.2, "fantastic": 3.4, "love": 3.2,

"satisfied": 2.2, "happy": 2.3, "fast": 1.6, "quick": 1.4, "helpful": 2.0, "friendly": 2.1,

"bad": -2.3, "terrible": -3.4, "awful": -3.2, "horrible": -3.3, "poor": -2.1, "slow": -1.6,

"rude": -2.2, "broken": -2.5, "buggy": -2.2, "expensive": -1.8, "cheap": 1.2, "worth": 1.5, "worthless": -3.0,

"refund": -1.2, "late": -1.5, "missing": -1.8, "nice": 1.6, "perfect": 3.0, "recommend": 2.4, "recommendation": 2.0,

"disappointed": -2.6, "disappointing": -2.6, "worst": -3.5, "waste": -2.7, "useless": -3.0, "noisy": -1.4,

"smooth": 1.7, "reliable": 2.2, "unreliable": -2.4, "durable": 1.8, "quality": 1.4, "low-quality": -2.1,

"love!": 3.4, "hate": -3.2, "horrid": -3.1, "delight": 2.4, "delighted": 2.8, "thrilled": 3.1,

"confusing": -1.6, "confuse": -1.6, "confused": -1.6, "intuitive": 2.0, "easy": 1.8, "difficult": -1.8,

"help": 0.8, "support": 0.6, "unhelpful": -2.3, "responsive": 1.7, "unresponsive": -2.1, "crash": -2.4,

"lag": -1.6, "laggy": -1.7, "smoothly": 1.8, "clean": 1.5, "dirty": -1.9

};

// Emojis with sentiment

const EMOJI = { "😀":2.5, "🙂":1.6, "😍":3.0, "👍":2.1, "😊":2.0, "😡":-3.0, "🤬":-3.2, "😠":-2.8, "👎":-2.2, "😢":-2.4 };

// Negations (invert upcoming sentiment within a small window)

const NEGATIONS = new Set(["not","no","never","hardly","barely","isn't","aren't","wasn't","weren't","don't","doesn't","didn't","won't","can't","couldn't","shouldn't","without"]);

// Intensifiers / diminishers

const INTENSIFIERS = { "very":1.5, "really":1.4, "extremely":1.8, "super":1.6, "so":1.2, "highly":1.5, "incredibly":1.7 };

const DIMINISHERS = { "slightly":0.6, "somewhat":0.7, "a-bit":0.7, "bit":0.8, "kinda":0.8, "kind-of":0.8 };

// Helpers

function normalize(text){

// Keep emojis; strip most punctuation but preserve hyphens for compounds

return text

.replace(/[\_\*#~`^+={}[\]|\\]/g," ")

.replace(/([.!?,;:()"])/g," $1 ") // space punctuation to detect exclamations

.replace(/\s+/g," ")

.trim()

.toLowerCase();

}

function tokenize(text){

// Split on whitespace; keep emojis as tokens

const tokens = [];

for (const raw of text.split(/\s+/)) {

if (!raw) continue;

// Separate trailing punctuation except ! ? which may act as emphasis

const word = raw.replace(/^[^a-z0-9😀🙂😍👍😊😡🤬😠👎😢-]+|[^a-z0-9😀🙂😍👍😊😡🤬😠👎😢-]+$/g, "");

if (word) tokens.push(word);

}

return tokens;

}

function sentimentForReview(review){

const original = review;

const text = normalize(review);

const hasExclaim = /!/.test(review);

const tokens = tokenize(text);

let score = 0;

const hits = []; // [{term, idx, value, flipped, amplified}]

let windowNegate = 0; // countdown after a negation token

for (let i=0; i<tokens.length; i++){

const t = tokens[i];

if (NEGATIONS.has(t)) { windowNegate = 3; continue; }

let mult = 1.0;

// look back one token for intensifier/diminisher

const prev = tokens[i-1] || "";

if (INTENSIFIERS[prev]) mult \*= INTENSIFIERS[prev];

if (DIMINISHERS[prev]) mult \*= DIMINISHERS[prev];

let val = 0;

if (t in LEXICON) val = LEXICON[t];

else if (t in EMOJI) val = EMOJI[t];

else if (t.endsWith("!")) { // e.g., "love!" present in lexicon; otherwise ignore

const base = t.slice(0,-1);

if (base in LEXICON) val = LEXICON[base] + 0.2;

}

let flipped = false;

if (val !== 0){

if (windowNegate > 0){

val = -val;

flipped = true;

}

val \*= mult;

score += val;

hits.push({term:t, idx:i, value:val, flipped, amplified:mult!==1});

}

// decay negate window

if (windowNegate > 0) windowNegate--;

}

// Exclamation emphasis if we already have sentiment

if (hasExclaim && score !== 0) {

score += score > 0 ? 0.4 : -0.4;

}

const label = score >= 0.5 ? "Positive" : (score <= -0.5 ? "Negative" : "Neutral");

return { score: +score.toFixed(2), label, hits, original };

}

function starsFromScore(score){

// Map score (-inf..inf) to 1..5 stars with soft clamp around -4..+4

const clamped = Math.max(-4, Math.min(4, score));

const normalized = (clamped + 4) / 8; // 0..1

const star = Math.max(1, Math.min(5, Math.round(1 + normalized \* 4)));

return "★".repeat(star) + "☆".repeat(5-star);

}

function highlight(review, hits){

// naive highlight by words; we'll wrap matched tokens (lowercased)

if (!hits.length) return escapeHTML(review);

const posTerms = new Set(hits.filter(h=>h.value>0).map(h=>h.term));

const negTerms = new Set(hits.filter(h=>h.value<0).map(h=>h.term));

// Tokenize the original text preserving spacing

return review.split(/(\s+)/).map(tok=>{

const low = tok.toLowerCase().replace(/^[^a-z0-9😀🙂😍👍😊😡🤬😠👎😢-]+|[^a-z0-9😀🙂😍👍😊😡🤬😠👎😢-]+$/g,"");

if (posTerms.has(low)) return `<span class="hl pos">${escapeHTML(tok)}</span>`;

if (negTerms.has(low)) return `<span class="hl neg">${escapeHTML(tok)}</span>`;

return escapeHTML(tok);

}).join("");

}

function escapeHTML(s){ return s.replace(/[&<>"']/g, c => ({'&':'&amp;','<':'&lt;','>':'&gt;','"':'&quot;',"'":'&#39;'}[c])) }

// UI wiring

const input = document.getElementById('input');

const analyzeBtn = document.getElementById('analyzeBtn');

const sampleBtn = document.getElementById('sampleBtn');

const clearBtn = document.getElementById('clearBtn');

const tbody = document.getElementById('tbody');

const posCount = document.getElementById('posCount');

const neuCount = document.getElementById('neuCount');

const negCount = document.getElementById('negCount');

const chartCanvas = document.getElementById('barChart');

const ctx = chartCanvas.getContext('2d');

function analyze(){

const lines = input.value.split(/\n/).map(l=>l.trim()).filter(Boolean);

tbody.innerHTML = "";

if (!lines.length){

tbody.innerHTML = `<tr><td colspan="4" style="color:var(--muted)">Nothing to analyze. Paste reviews and try again.</td></tr>`;

updateCounts(0,0,0); drawChart(0,0,0); return;

}

let p=0,n=0,u=0;

for (const line of lines){

const res = sentimentForReview(line);

if (res.label==="Positive") p++; else if (res.label==="Negative") n++; else u++;

const tr = document.createElement('tr');

const labelClass = res.label==="Positive" ? "pos" : (res.label==="Negative" ? "neg" : "neu");

tr.innerHTML = `

<td>${highlight(res.original, res.hits)}</td>

<td><span class="pill ${labelClass}">${res.label}</span></td>

<td class="score">${res.score.toFixed(2)}</td>

<td class="stars">${starsFromScore(res.score)}</td>

`;

tbody.appendChild(tr);

}

updateCounts(p,u,n);

drawChart(p,u,n);

}

function updateCounts(p,u,n){

posCount.textContent = p; neuCount.textContent = u; negCount.textContent = n;

}

function drawChart(p,u,n){

// Simple bar chart without external libs

const W = chartCanvas.width, H = chartCanvas.height;

ctx.clearRect(0,0,W,H);

// axes

ctx.strokeStyle = "#1f2937"; ctx.lineWidth = 2;

ctx.beginPath(); ctx.moveTo(40,10); ctx.lineTo(40,H-30); ctx.lineTo(W-10,H-30); ctx.stroke();

const data = [p,u,n];

const labels = ["Positive","Neutral","Negative"];

const colors = ["#16a34a","#a1a1aa","#dc2626"];

const max = Math.max(1, ...data);

const barW = 60, gap = (W-80 - (barW\*3))/4;

let x = 40 + gap;

ctx.font = "12px system-ui, sans-serif"; ctx.textAlign="center";

for(let i=0;i<data.length;i++){

const h = Math.round((H-60) \* (data[i]/max));

ctx.fillStyle = colors[i];

ctx.fillRect(x, H-30-h, barW, h);

ctx.fillStyle = "#cbd5e1";

ctx.fillText(labels[i], x + barW/2, H-12);

ctx.fillText(String(data[i]), x + barW/2, H-38-h);

x += barW + gap;

}

}

sampleBtn.addEventListener('click', ()=>{

input.value = [

"I absolutely love this product! Shipping was fast 😀",

"The support team is not helpful and the quality is terrible.",

"Price is okay, nothing special.",

"The app is very intuitive and really fast. Highly recommend!",

"I was somewhat disappointed—delivery was late and the box arrived broken.",

"Customer care is responsive and friendly 👍",

"It's not great, kinda confusing UI and laggy performance.",

"Perfect quality. Thrilled!"

].join("\n");

});

clearBtn.addEventListener('click', ()=>{ input.value=""; analyze(); });

analyzeBtn.addEventListener('click', analyze);

// Draw initial empty chart

drawChart(0,0,0);

</script>

</body>

</html>