

Ruta: src/components/ModelsInfo.jsx

```
import React from 'react'
import { Brain, Zap } from 'lucide-react'

const ModelsInfo = () => {
  return (
    <div className="models">
      <div className="model-card">
        <div className="model-icon">
          <Brain />
        </div>
        <h3>Gemini</h3>
        <p>Modelo avanzado de lenguaje para conversaciones naturales</p>
      </div>
      <div className="model-card">
        <div className="model-icon">
          <Zap />
        </div>
        <h3>GPT-4</h3>
        <p>Modelo de última generación para tareas complejas</p>
      </div>
    </div>
  )
}

export default ModelsInfo
```

Ruta: src/index.css

```
:root {
  font-family: system-ui, Avenir, Helvetica, Arial, sans-serif;
  line-height: 1.5;
  font-weight: 400;

  color-scheme: light dark;
  color: rgba(255, 255, 255, 0.87);
  background-color: #242424;

  font-synthesis: none;
  text-rendering: optimizeLegibility;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}

a {
  font-weight: 500;
  color: #646cff;
  text-decoration: inherit;
}
a:hover {
  color: #535bf2;
}

body {
  margin: 0;
  display: flex;
  place-items: center;
  min-width: 320px;
  min-height: 100vh;
}

h1 {
  font-size: 3.2em;
  line-height: 1.1;
}

button {
  border-radius: 8px;
  border: 1px solid transparent;
  padding: 0.6em 1.2em;
  font-size: 1em;
  font-weight: 500;
  font-family: inherit;
  background-color: #1a1a1a;
  cursor: pointer;
  transition: border-color 0.25s;
}
button:hover {
  border-color: #646cff;
}
button:focus,
button:focus-visible {
  outline: 4px auto -webkit-focus-ring-color;
}

@media (prefers-color-scheme: light) {
  :root {
    color: #213547;
    background-color: #ffffff;
  }
  a:hover {
    color: #747bff;
  }
  button {
    background-color: #f9f9f9;
  }
}
```

Ruta: src/main.jsx

```
import React from 'react'
import ReactDOM from 'react-dom/client'
import App from './App.jsx'
import './styles/App.css'
import './App.css' // <-- AÑADE ESTA LÍNEA

ReactDOM.createRoot(document.getElementById('root')).render(
  <React.StrictMode>
    <App />
  </React.StrictMode>,
)
```

Ruta: src/services/api.js

```
const API_BASE = '/api'

export const sendMessage = async (message) => {
  try {
    console.log(`Ø=Ý Frontend: Enviando mensaje: "${message}"`)
    console.log(`Ø=Ý Frontend: URL de destino: ${API_BASE}/preguntar`)

    const response = await fetch(`${API_BASE}/preguntar`, {
      method: 'POST',
      headers: {
        'Content-Type': 'application/json',
      },
      body: JSON.stringify({ pregunta: message })
    })

    console.log(`Ø=Ý Frontend: Response status: ${response.status}`)
    console.log(`Ø=Ý Frontend: Response ok: ${response.ok}`)
    console.log(`Ø=Ý Frontend: Response headers:`, Object.fromEntries(response.headers.entries()))

    if (!response.ok) {
      const errorText = await response.text()
      console.error(`L Frontend: Error response: ${errorText}`)
      throw new Error(`HTTP ${response.status}: ${errorText}`)
    }

    const responseText = await response.text()
    console.log(`Ø=Ý Frontend: Raw response text: "${responseText}"`)

    let data;
    try {
      data = JSON.parse(responseText)
      console.log(`" Frontend: JSON parsed successfully:`, data)
    } catch (parseError) {
      console.error(`L Frontend: JSON parse error:`, parseError)
      throw new Error(`Invalid JSON response: ${responseText}`)
    }

    return data
  } catch (error) {
    console.error(`L Frontend: Error en sendMessage:`, error)

    if (error.message.includes('Failed to fetch')) {
      throw new Error('No se pudo conectar con el servidor. Verifica que el backend esté ejecutándose en http://localhost:5000')
    }
    throw error
  }
}

export const startMonitoring = async () => {
  const response = await fetch(`${API_BASE}/monitor/start`, { method: 'POST' })
  if (!response.ok) throw new Error('No se pudo iniciar el monitoreo')
  return await response.json()
}

export const stopMonitoring = async () => {
  const response = await fetch(`${API_BASE}/monitor/stop`, { method: 'POST' })
  if (!response.ok) throw new Error('No se pudo detener el monitoreo')
  return await response.json()
}

export const getMonitoringStatus = async () => {
  const response = await fetch(`${API_BASE}/monitor/status`)
  if (!response.ok) throw new Error('No se pudo obtener el estado del monitoreo')
  return await response.json()
}
```

Ruta: src/styles/App.css

```
:root {
  --primary-color: #6366f1;
  --primary-dark: #4f46e5;
  --secondary-color: #8b5cf6;
  --light-color: #f8fafc;
  --dark-color: #1e293b;
  --user-color: #6366f1;
  --bot-color: #10b981;
  --border-color: #e2e8f0;
  --shadow: 0 10px 25px -5px rgba(0, 0, 0, 0.1), 0 8px 10px -6px rgba(0, 0, 0, 0.1);
  --gradient: linear-gradient(135deg, var(--primary-color), var(--secondary-color));
}

* {
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}

body {
  font-family: 'Inter', -apple-system, BlinkMacSystemFont, 'Segoe UI', 'Roboto', sans-serif;
  background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
  min-height: 100vh;
  padding: 20px;
}

.app {
  display: flex;
  justify-content: center;
  align-items: center;
  min-height: calc(100vh - 40px);
}

.container {
  width: 100%;
  max-width: 900px;
  background: white;
  border-radius: 20px;
  box-shadow: var(--shadow);
  overflow: hidden;
  backdrop-filter: blur(10px);
}

/* Header Styles */
.header {
  background: var(--gradient);
  color: white;
  padding: 30px;
  text-align: center;
}

.header-content {
  max-width: 600px;
  margin: 0 auto;
}

.logo {
  display: flex;
  align-items: center;
  justify-content: center;
  gap: 12px;
  margin-bottom: 10px;
}

.logo-icon {
  width: 32px;
  height: 32px;
}

.header h1 {
  font-size: 2.5rem;
  font-weight: 700;
  margin: 0;
}

.header p {
  font-size: 1.1rem;
  opacity: 0.9;
  margin: 0;
}
```

```

/* Models Styles */
.models {
  display: grid;
  grid-template-columns: 1fr 1fr;
  gap: 20px;
  padding: 25px;
  background: var(--light-color);
  border-bottom: 1px solid var(--border-color);
}

.model-card {
  background: white;
  padding: 20px;
  border-radius: 12px;
  text-align: center;
  box-shadow: 0 2px 8px rgba(0, 0, 0, 0.05);
  border: 1px solid var(--border-color);
  transition: transform 0.2s, box-shadow 0.2s;
}

.model-card:hover {
  transform: translateY(-2px);
  box-shadow: 0 4px 12px rgba(0, 0, 0, 0.1);
}

.model-icon {
  width: 48px;
  height: 48px;
  background: var(--gradient);
  border-radius: 12px;
  display: flex;
  align-items: center;
  justify-content: center;
  margin: 0 auto 15px;
  color: white;
}

.model-card h3 {
  color: var(--dark-color);
  font-size: 1.2rem;
  margin-bottom: 8px;
  font-weight: 600;
}

.model-card p {
  color: #64748b;
  font-size: 0.9rem;
  line-height: 1.4;
  margin: 0;
}

/* Chat Container */
.chat-container {
  padding: 0;
}

.chat-controls {
  padding: 15px 25px;
  background: var(--light-color);
  border-bottom: 1px solid var(--border-color);
}

.monitor-btn {
  display: flex;
  align-items: center;
  gap: 8px;
  background: var(--primary-color);
  color: white;
  border: none;
  padding: 10px 16px;
  border-radius: 8px;
  font-size: 0.9rem;
  font-weight: 500;
  cursor: pointer;
  transition: all 0.2s;
}

.monitor-btn:hover {
  background: var(--primary-dark);
  transform: translateY(-1px);
}

.monitor-btn.active {
  background: #ef4444;
}

```

```

}

.monitor-btn.active:hover {
  background: #dc2626;
}

.chat-messages {
  height: 400px;
  overflow-y: auto;
  padding: 20px;
  background: #fafafa;
}

/* Message Styles */
.message {
  display: flex;
  gap: 12px;
  margin-bottom: 20px;
  max-width: 80%;
}

.message.user-message {
  margin-left: auto;
  flex-direction: row-reverse;
}

.message-avatar {
  width: 32px;
  height: 32px;
  border-radius: 50%;
  display: flex;
  align-items: center;
  justify-content: center;
  flex-shrink: 0;
  margin-top: 4px;
}

.user-message .message-avatar {
  background: var(--user-color);
  color: white;
}

.bot-message .message-avatar {
  background: var(--bot-color);
  color: white;
}

.message-content {
  flex: 1;
}

.message-text {
  padding: 12px 16px;
  border-radius: 18px;
  font-size: 0.95rem;
  line-height: 1.4;
  word-wrap: break-word;
}

.user-message .message-text {
  background: var(--user-color);
  color: white;
  border-bottom-right-radius: 5px;
}

.bot-message .message-text {
  background: white;
  color: var(--dark-color);
  border: 1px solid var(--border-color);
  border-bottom-left-radius: 5px;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.05);
}

.message-time {
  font-size: 0.75rem;
  color: #94a3b8;
  margin-top: 4px;
  padding: 0 4px;
}

.user-message .message-time {
  text-align: right;
}

```



```

/* Typing Indicator */
.typing-indicator {
  display: flex;
  gap: 4px;
  padding: 12px 16px;
}

.typing-indicator span {
  width: 8px;
  height: 8px;
  border-radius: 50%;
  background: #94a3b8;
  animation: typing 1.4s infinite ease-in-out;
}

.typing-indicator span:nth-child(1) { animation-delay: 0s; }
.typing-indicator span:nth-child(2) { animation-delay: 0.2s; }
.typing-indicator span:nth-child(3) { animation-delay: 0.4s; }

@keyframes typing {
  0%, 60%, 100% { transform: scale(1); opacity: 0.4; }
  30% { transform: scale(1.2); opacity: 1; }
}

/* Chat Input */
.chat-input {
  display: flex;
  gap: 12px;
  padding: 20px;
  background: white;
  border-top: 1px solid var(--border-color);
}

.chat-input input {
  flex: 1;
  padding: 12px 18px;
  border: 2px solid var(--border-color);
  border-radius: 25px;
  font-size: 1rem;
  outline: none;
  transition: border-color 0.2s;
}

.chat-input input:focus {
  border-color: var(--primary-color);
}

.chat-input button {
  width: 48px;
  height: 48px;
  background: var(--primary-color);
  color: white;
  border: none;
  border-radius: 50%;
  cursor: pointer;
  display: flex;
  align-items: center;
  justify-content: center;
  transition: all 0.2s;
}

.chat-input button:hover:not(:disabled) {
  background: var(--primary-dark);
  transform: scale(1.05);
}

.chat-input button:disabled {
  background: #94a3b8;
  cursor: not-allowed;
  transform: none;
}

/* Scrollbar Styles */
.chat-messages::-webkit-scrollbar {
  width: 6px;
}

.chat-messages::-webkit-scrollbar-track {
  background: #f1f5f9;
  border-radius: 10px;
}

.chat-messages::-webkit-scrollbar-thumb {
  background: #cbd5e1;
}

```

```

    border-radius: 10px;
}

.chat-messages::-webkit-scrollbar-thumb:hover {
    background: #94a3b8;
}

/* Responsive Design */
@media (max-width: 768px) {
    body {
        padding: 10px;
    }

    .container {
        border-radius: 15px;
    }

    .header {
        padding: 20px;
    }

    .header h1 {
        font-size: 2rem;
    }

    .models {
        grid-template-columns: 1fr;
        gap: 15px;
        padding: 20px;
    }

    .chat-messages {
        height: 350px;
        padding: 15px;
    }

    .message {
        max-width: 90%;
    }

    .chat-input {
        padding: 15px;
    }
}

/* Estilos adicionales para mejorar la experiencia */
.chat-messages:empty::before {
    content: "¡Hola! Soy tu asistente MAAS. ¿En qué puedo ayudarte hoy?";
    display: block;
    text-align: center;
    color: #94a3b8;
    font-style: italic;
    padding: 20px;
}

/* Mejoras en la accesibilidad */
.chat-input button:focus {
    outline: 2px solid var(--primary-color);
    outline-offset: 2px;
}

.chat-input input:focus {
    outline: none;
    border-color: var(--primary-color);
    box-shadow: 0 0 0 3px rgba(99, 102, 241, 0.1);
}

/* Mejorar el indicador de escritura */
.typing-indicator {
    display: flex;
    align-items: center;
    gap: 4px;
    padding: 12px 16px;
    color: #64748b;
    font-style: italic;
}

.typing-indicator span {
    width: 6px;
    height: 6px;
    border-radius: 50%;
    background: #94a3b8;
    animation: typing 1.4s infinite ease-in-out;
}

```

```

@keyframes typing {
  0%, 60%, 100% {
    transform: translateY(0);
    opacity: 0.4;
  }
  30% {
    transform: translateY(-5px);
    opacity: 1;
  }
}

/* Estados de deshabilitado mejorados */
.chat-input button:disabled {
  opacity: 0.5;
  cursor: not-allowed;
  transform: none !important;
}

.chat-input input:disabled {
  opacity: 0.7;
  cursor: not-allowed;
}

/* Scroll suave */
.chat-messages {
  scroll-behavior: smooth;
}

/* Dashboard Styles */
.dashboard {
  padding: 20px;
  max-width: 1400px;
  margin: 0 auto;
}

.dashboard-header {
  display: flex;
  justify-content: space-between;
  align-items: center;
  margin-bottom: 30px;
  padding-bottom: 15px;
  border-bottom: 2px solid var(--border-color);
}

.dashboard-header h1 {
  color: var(--dark-color);
  margin: 0;
  font-size: 2rem;
}

.dashboard-controls {
  display: flex;
  align-items: center;
  gap: 15px;
}

.btn-refresh {
  display: flex;
  align-items: center;
  gap: 8px;
  background: var(--primary-color);
  color: white;
  border: none;
  padding: 10px 15px;
  border-radius: 6px;
  cursor: pointer;
  transition: background-color 0.2s;
}

.btn-refresh:hover {
  background: var(--primary-dark);
}

.auto-refresh-toggle {
  display: flex;
  align-items: center;
  gap: 8px;
  font-size: 0.9rem;
  color: var(--dark-color);
}

/* Métricas Grid */
.metrics-grid {
  display: grid;

```

```
grid-template-columns: repeat(auto-fit, minmax(250px, 1fr));
gap: 20px;
margin-bottom: 30px;
}
```

```
.metrica-card {
  background: white;
  border: 1px solid var(--border-color);
  border-radius: 12px;
  padding: 20px;
  display: flex;
  align-items: center;
  gap: 15px;
  box-shadow: 0 2px 8px rgba(0, 0, 0, 0.1);
  transition: transform 0.2s, box-shadow 0.2s;
}
```

```
.metrica-card:hover {
  transform: translateY(-2px);
  box-shadow: 0 4px 12px rgba(0, 0, 0, 0.15);
}
```

```
.metrica-icon {
  width: 50px;
  height: 50px;
  background: var(--gradient);
  border-radius: 10px;
  display: flex;
  align-items: center;
  justify-content: center;
  color: white;
}
```

```
.metrica-content h3 {
  margin: 0 0 5px 0;
  font-size: 0.9rem;
  color: #64748b;
  font-weight: 500;
}
```

```
.metrica-valor {
  margin: 0;
  font-size: 1.5rem;
  font-weight: bold;
  color: var(--dark-color);
}
```

```
.metrica-sub {
  display: flex;
  gap: 10px;
  margin-top: 5px;
  font-size: 0.8rem;
}
```

```
/* Alertas */
.alertas-section {
  margin-bottom: 30px;
}
```

```
.alertas-section h2 {
  color: var(--dark-color);
  margin-bottom: 15px;
  font-size: 1.5rem;
}
```

```
.alertas-grid {
  display: grid;
  gap: 10px;
}
```

```
.alerta-card {
  display: flex;
  align-items: flex-start;
  gap: 12px;
  padding: 15px;
  border-radius: 8px;
  border-left: 4px solid;
}
```

```
.alerta-card.critical {
  background: #fef2f2;
  border-left-color: #ef4444;
  color: #dc2626;
}
```

```
.alerta-card.warning {
  background: #ffffeb;
  border-left-color: #f59e0b;
  color: #d97706;
}

.alerta-content {
  flex: 1;
}

.alerta-content strong {
  display: block;
  margin-bottom: 5px;
}

.alerta-content p {
  margin: 0 0 5px 0;
  font-size: 0.9rem;
}

.alerta-content small {
  color: #6b7280;
  font-size: 0.8rem;
}

/* Máquinas Grid */
.maquinas-section h2 {
  color: var(--dark-color);
  margin-bottom: 20px;
  font-size: 1.5rem;
}

.maquinas-grid {
  display: grid;
  grid-template-columns: repeat(auto-fill, minmax(350px, 1fr));
  gap: 20px;
}

.maquina-card {
  background: white;
  border: 1px solid;
  border-radius: 12px;
  padding: 20px;
  box-shadow: 0 2px 8px rgba(0, 0, 0, 0.1);
  transition: transform 0.2s, box-shadow 0.2s;
}

.maquina-card:hover {
  transform: translateY(-2px);
  box-shadow: 0 4px 12px rgba(0, 0, 0, 0.15);
}

.maquina-header {
  display: flex;
  justify-content: space-between;
  align-items: flex-start;
  margin-bottom: 15px;
  padding-bottom: 15px;
  border-bottom: 1px solid var(--border-color);
}

.maquina-info h3 {
  margin: 0 0 5px 0;
  color: var(--dark-color);
  font-size: 1.1rem;
}

.salud-badge {
  font-size: 0.8rem;
  padding: 2px 8px;
  border-radius: 12px;
  background: currentColor;
  opacity: 0.1;
  font-weight: 500;
}

.maquina-estado {
  display: flex;
  align-items: center;
  gap: 5px;
  font-size: 0.9rem;
  color: #64748b;
}
```

```

.maquina-details {
  display: flex;
  flex-direction: column;
  gap: 8px;
}

.detail-row {
  display: flex;
  justify-content: space-between;
  font-size: 0.9rem;
}

.detail-row span:first-child {
  font-weight: 500;
  color: #64748b;
}

.detail-row span:last-child {
  color: var(--dark-color);
}

/* Loading State */
.dashboard-loading {
  display: flex;
  flex-direction: column;
  align-items: center;
  justify-content: center;
  padding: 60px 20px;
  color: #64748b;
}

.dashboard-loading p {
  margin-top: 15px;
  font-size: 1.1rem;
}

/* Responsive */
@media (max-width: 768px) {
  .dashboard-header {
    flex-direction: column;
    gap: 15px;
    align-items: flex-start;
  }

  .metricas-grid {
    grid-template-columns: 1fr;
  }

  .maquinas-grid {
    grid-template-columns: 1fr;
  }

  .maquina-header {
    flex-direction: column;
    gap: 10px;
  }
}

/* Estados de error y loading */
.dashboard-error {
  display: flex;
  flex-direction: column;
  align-items: center;
  justify-content: center;
  padding: 60px 20px;
  text-align: center;
  color: #64748b;
}

.dashboard-error h2 {
  color: #ef4444;
  margin-bottom: 10px;
}

.no-data {
  display: flex;
  flex-direction: column;
  align-items: center;
  justify-content: center;
  padding: 40px 20px;
  color: #94a3b8;
  text-align: center;
}

```

```
/* Mejoras en los estilos existentes */
.metrica-valor {
  margin: 0;
  font-size: 1.5rem;
  font-weight: bold;
  color: var(--dark-color);
  min-height: 1.5rem; /* Evitar saltos de layout */
}
```

```
.maquina-card {
  background: white;
  border: 1px solid;
  border-radius: 12px;
  padding: 20px;
  box-shadow: 0 2px 8px rgba(0, 0, 0, 0.1);
  transition: transform 0.2s, box-shadow 0.2s;
  border-color: #e2e8f0; /* Color por defecto */
}
```

```
/* Colores de fondo para estados de salud */
.bg-green-50 { background-color: #f0fdf4; }
.bg-yellow-50 { background-color: #fefce8; }
.bg-red-50 { background-color: #fef2f2; }
.bg-gray-50 { background-color: #f9fafb; }
```

```
.border-green-200 { border-color: #bbf7d0; }
.border-yellow-200 { border-color: #fde68a; }
.border-red-200 { border-color: #fecaca; }
.border-gray-200 { border-color: #e5e7eb; }
```

```
/* Mejorar la responsividad */
@media (max-width: 768px) {
  .dashboard-header {
    flex-direction: column;
    gap: 15px;
    align-items: flex-start;
  }
```

```
.metricas-grid {
  grid-template-columns: 1fr;
}
```

```
.maquinas-grid {
  grid-template-columns: 1fr;
}
```

```
.maquina-header {
  flex-direction: column;
  gap: 10px;
}
```

```
.dashboard-controls {
  flex-direction: column;
  gap: 10px;
  width: 100%;
}
```

```
.btn-refresh {
  width: 100%;
  justify-content: center;
}
}
```

```
/* Mejorar accesibilidad */
.btn-refresh:focus,
.nav-btn:focus {
  outline: 2px solid var(--primary-color);
  outline-offset: 2px;
}
```

```
.auto-refresh-toggle input:focus {
  outline: 2px solid var(--primary-color);
  outline-offset: 2px;
}
```