



ECO PULSE

The screenshot shows a web browser window with the URL "eco puls" in the address bar. The page header includes the "Eco Puls" logo, a search bar, and navigation links for "Muammo", "Yechim", "Jamoa", "Yo'l xaritasi", and "Kirish". A green button labeled "Innovatsion yechim" is visible. The main title "Aqli daraxt monitoring tizimi" is prominently displayed, followed by a subtitle about real-time monitoring and protection. Two buttons, "Demo ko'rish →" and "Batafsil ma'lumot", are present. Below the title are four cards: "24/7 Kuzatuv" (bell icon), "Real-vaqt Ma'lumotlar" (chart icon), "100% Xavfsizlik" (shield icon), and "AI Tahsil" (brain icon). The background features a large green leaf graphic.

Aqli daraxt monitoring tizimi

Real-vaqtida daraxtlarni kuzatish, xavfsizlikni ta'minlash va o'rmon resurslarini himoya qilish

Demo ko'rish → Batafsil ma'lumot

24/7
Kuzatuv

Real-vaqt
Ma'lumotlar

100%
Xavfsizlik

AI
Tahsil

Monitoring tizimi

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Eco Puls Muammo Yechim Jamoa Yo'l xaritasi Kirish

Muammo → Yechim

O'rmon xavfsizligi va monitoring muammolariga innovatsion yechim

Muammo

- ⚠ Daraxtlarni kesish va qonuniy bo'lmagan daraxt kesish holatlari
- ⚠ O'rmon yong'inlarini erta aniqlash qiyinligi
- ⚠ Real-vaqtida monitoring tizimlarining yo'qligi
- ⚠ Atrof-muhit sharoitlarini kuzatishning qiyinligi
- ⚠ Ma'lumotlarni to'plash va tahlil qilishning samarasizligi

Yechim

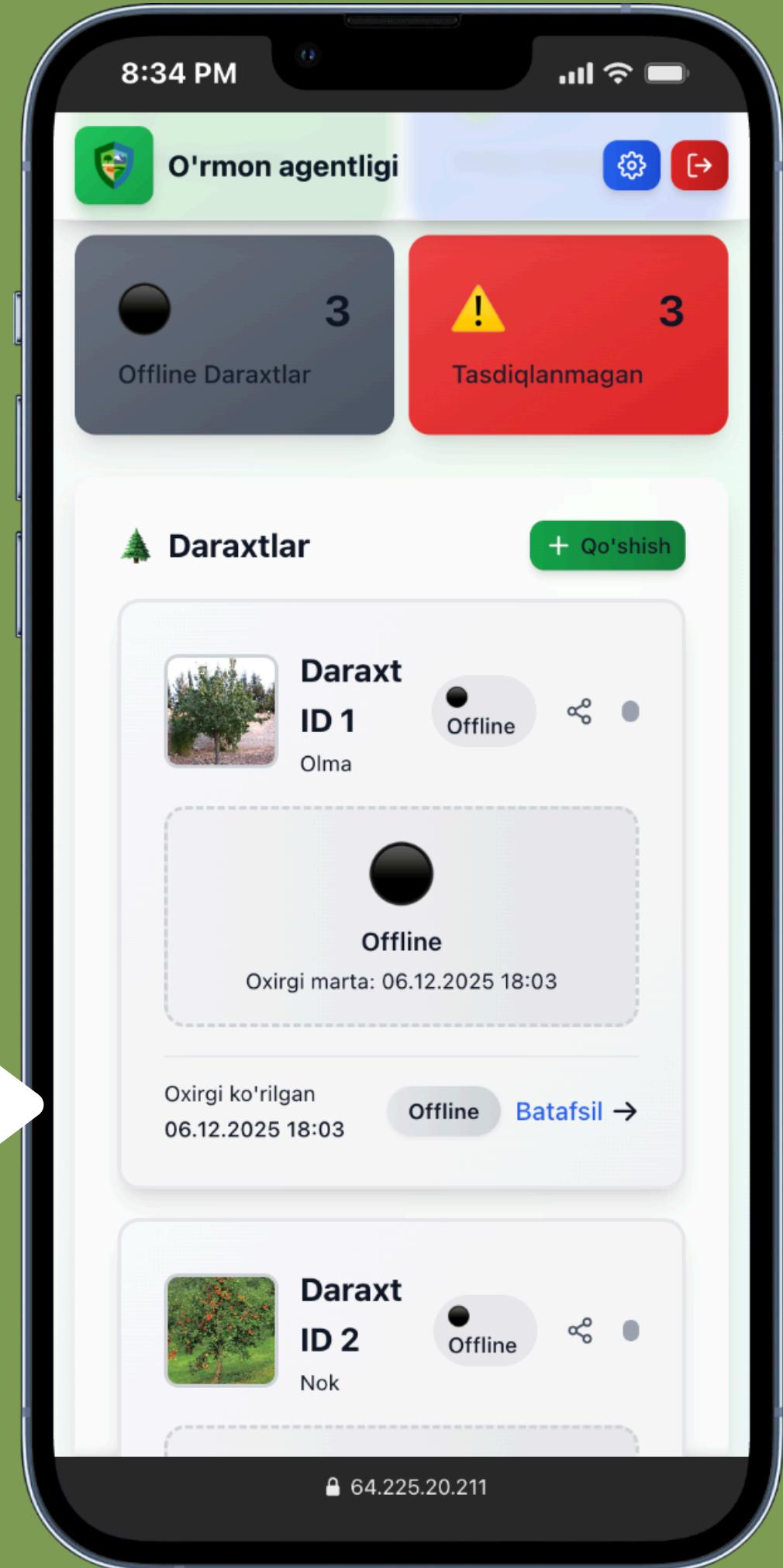
- ✓ IoT asosidagi real-vaqtida monitoring tizimi
- ✓ MPU6050 sensor orqali daraxt kesishni aniqlash
- ✓ MQ-2 sensor bilan yong'in erta aniqlash
- ✓ Harorat va namlikni kuzatish (DHT11)
- ✓ Web dashboard va mobil ilova orqali boshqarish
- ✓ AI asosidagi tahlil va bashorat



Rahimov
School

Loyihanining
umumiyl
ko'inish

Boshqaruv
panel



Hardware



A screenshot of a computer monitor displaying a web-based monitoring system titled "Eco Puls". The interface is light blue and white. At the top, there's a navigation bar with icons for search, refresh, and window control, followed by the site name "eco puls". On the right side of the nav bar are links for "Muammo", "Yechim", "Jamoa", "Yo'l xaritasi", and a green "Kirish" button. Below the nav bar, the main content area is divided into several sections, each featuring an icon and a title. The sections are: "Harorat monitoringi" (thermometer icon), "Namlik kuzatuv" (water drop icon), "Yong'in aniqlash" (flame icon); "Daraxt kesish aniqlash" (warning sign icon), "Telemetriya grafiklari" (graph icon), "Xabarnomalar" (bell icon); "Mobil qo'llab-quvvatlash" (mobile phone icon), "Wireless aloqa" (Wi-Fi icon), and "Ma'lumotlar bazasi" (database icon). Each section also has a brief description below its title.

Eco Puls

Muammo Yechim Jamoa Yo'l xaritasi Kirish

Harorat monitoringi

Real-vaqtda harorat o'lchash va tarixiy ma'lumotlar

Namlik kuzatuv

Atrof-muhit namligini doimiy kuzatish

Yong'in aniqlash

MQ-2 sensor orqali yong'in erta aniqlash

Daraxt kesish aniqlash

MPU6050 sensor bilan daraxt kesishni aniqlash

Telemetriya grafiklari

Barcha sensor ma'lumotlarini vizual ko'rinishda

Xabarnomalar

Xavfli holatlar uchun darhol xabarnomalar

Mobil qo'llab-quvvatlash

Barcha qurilmalarda ishlaydigan responsive dizayn

Wireless aloqa

nRF24L01 va Wi-Fi orqali ma'lumot uzatish

Ma'lumotlar bazasi

PostgreSQL bilan ishonchli ma'lumotlar saqlash

Tizim imkoniyatlari

Keng qamrovli monitoring va
boshqaruv yechimi

The screenshot shows the Eco Puls web application interface. At the top, there is a header with the logo 'Eco Puls', the URL 'https://eco-puls.uz', and user information 'Xush kelibsiz, admin Admin'. Below the header, there are four colored boxes representing different categories of trees: green for 'Jami Daraxtlar' (3), blue for 'Onlayn Daraxtlar' (0), dark grey for 'Offline Daraxtlar' (3), and red for 'Tasdiqlanmagan' (3). The main content area is divided into two sections: 'Daraxtlar' (Trees) and 'Ogohlantirishlar' (Alerts). The 'Daraxtlar' section displays two cards for trees ID 1 and ID 2, both labeled 'Offline' with last ping times of 06.12.2025 18:03 and 06.12.2025 18:06 respectively. The 'Ogohlantirishlar' section shows a card for tree #3, which is 'Kesilgan' (Cut) and has an MPU6050 sensor. It includes a note about the MPU6050 accelerometer detecting movement changes and a button to 'Tasdiqlash' (Verify).

Dashboard > Statistikalar > Daraxtalar va
> Ogohlantirishlar



Monitoring tizimi

Texnologiyalar

The screenshot shows a web browser window displaying the website <https://eco-puls.uz>. The page title is "Texnologiyalar". The header includes the "Eco Puls" logo, a language switcher, and navigation links for "Muammo", "Yechim", "Jamoa", "Yo'l xaritasi", and a green "Kirish" button. The main content area features a green banner with the title "Biz foydalangan texnologiyalar" and four sections: "Frontend", "Backend", "Hardware", and "DevOps", each listing specific technologies with checkmarks.

Biz foydalangan texnologiyalar

Frontend

- ✓ React
- ✓ Next.js
- ✓ Tailwind CSS
- ✓ Three.js

Backend

- ✓ Node.js
- ✓ Express
- ✓ PostgreSQL
- ✓ Socket.IO

Hardware

- ✓ ESP8266
- ✓ Arduino
- ✓ nRF24L01
- ✓ Sensors

DevOps

- ✓ Docker
- ✓ GitHub Actions
- ✓ Nginx
- ✓ Linux



Rahimov
School

Bizning jamoa



**Nurbek
Po'latov**



**Kamron
Toxirmirzayev**



**Shaxzod
Hasanov**



**VAQTINGIZ
UCHUN
RAHMAT**