OPTIYOU

Digital Foot Health Monitoring & Personalized Production System





ALLDREAMS
VISION GEN AI
ANALYSIS • GENETICS • PERFORMANCE • INTELLIGENCE
by SPORTOTERM

Ecosystem

The Hybrid Union of Analysis, Design and Production: The Optiyou Ecosystem

Dashboard

- Digital platform blending AI-powered biomechanical analysis with expert insight.
- Central software solution for tracking and analysing data.



Orthopedic

- Orthopedic insole designed to fully match biomechanical data.



Sandal

- Lattice-structured design that eases daily fatigue and relaxes muscles and joints.
- Flexible, 3D-printed form offering personalised support.



Footwear

Shoes

- Custom Lattice Orthopedic Shoe
- Everyday sole platform whose personalised lattice architecture delivers ideal cushioning and high ergonomics with every step.



Worker

- Work shoe with a data-driven orthopedic insole
- Next-generation safety shoe with personalised orthopedic support.



DML



- A digital manufacturing lab founded through university–industry collaboration, with 3D printing and CNC machining infrastructure, where production, R&D, product development and clinical studies for MDR certification are carried out.

Digital Manufacturing Lab (DML)

The Digital Manufacturing Lab is a fully integrated research and development environment, founded through a university–industry partnership and spanning everything from digital analysis to production.



- “Digital Manufacturing” in healthcare
- AI-powered analyses
- Clinical testing & MDR R&D
- Case studies
- Orthopedic production infrastructure
- Academic research processes



Patient-Specific Anatomical Models

- Segmentation from CT and MR images
- Guide models that mark incision sites and angles, enabling surgeons to plan precisely before surgery



Medical Training Models

- Medical models produced from real cases for training medical students.

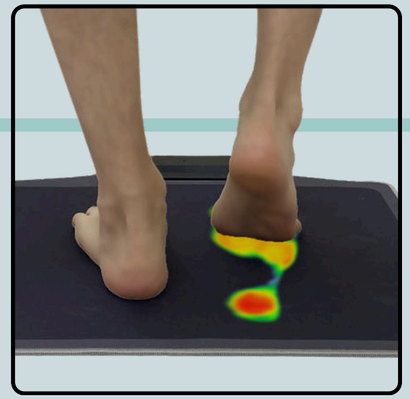
Biomechanical analysis & modelling | Rapid prototyping | Personalised orthopedic product design | MDR-class product design | CNC Machining

Generative & parametric design | AI | Additive Manufacturing (FDM & SLA)

Data-Driven Foot Health Technology



3D Foot Scanning



Plantar Pressure Measurement



Data-Driven Anatomical Categorization



Digital Manufacturing



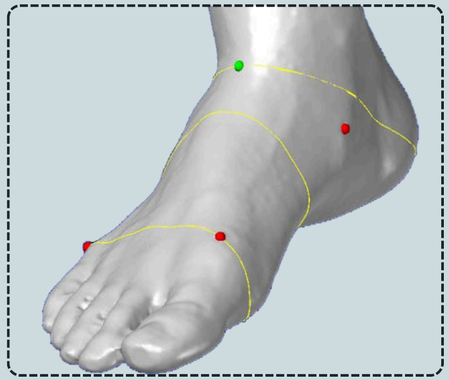
Data Driven Orthopedic Insoles



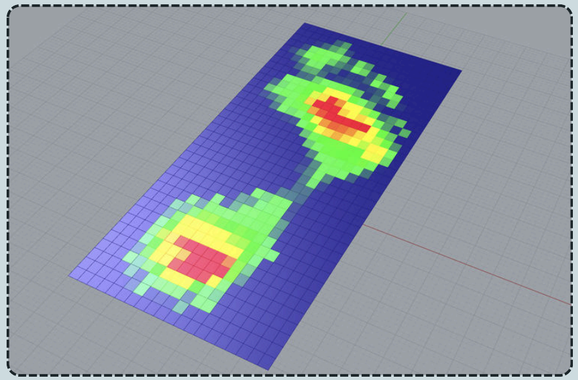
Digital Foot Health Monitoring

OPTIYOU Measurements

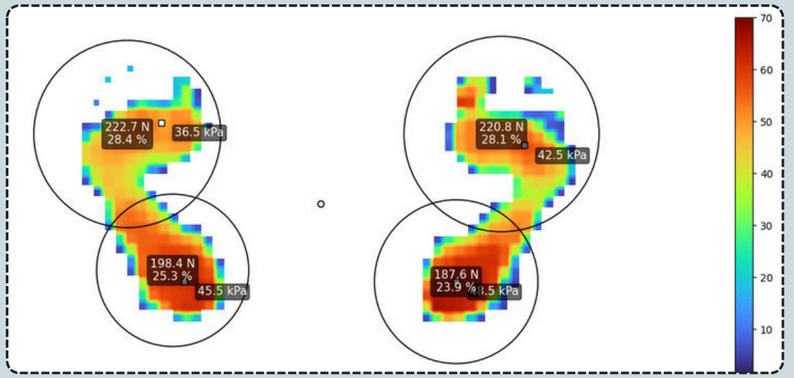
The OPTIYOU measurement system evaluates 3D foot scanning and plantar pressure data together, taking a holistic approach to the user's biomechanics. More than 20 anatomical and biomechanical parameters are measured and reported.



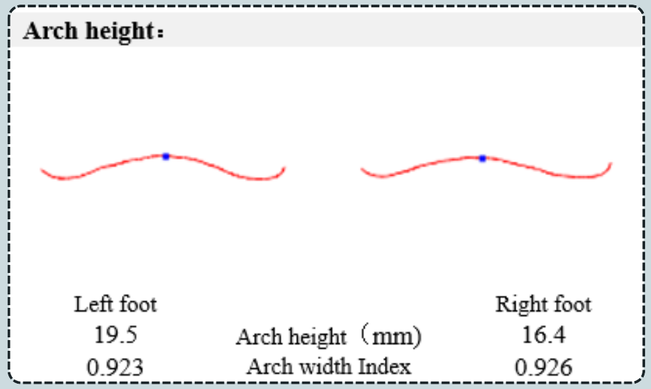
3D foot scan data



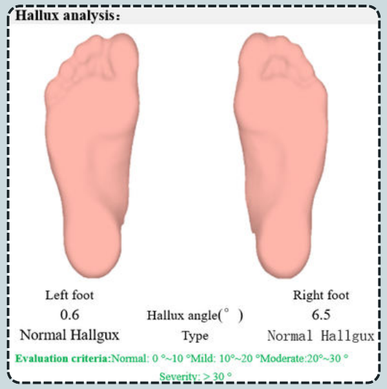
Plantar pressure map



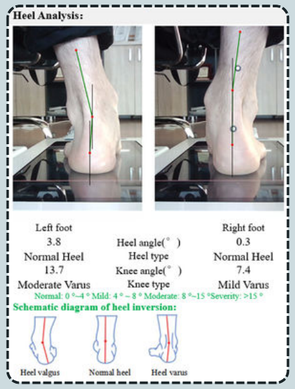
Point plantar pressure analysis



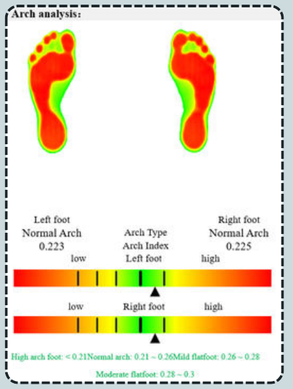
Arch Analysis



Hallux Analysis



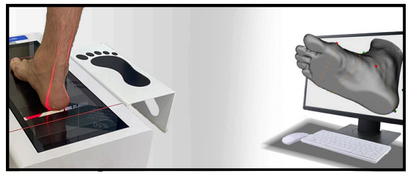
Heel Analysis



Arch Analysis

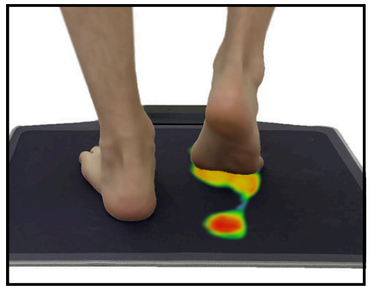
Digital Tracking & Digital Manufacturing Service for Foot Health

3D Scan Data



3D Foot Scan Data

Static/Dynamic Pressure Data



Static Plantar Pressure Measurement

OYAI Dashboard



Measurement results are available on our website. Data-driven, AI-supported analysis is performed and digital tracking is provided.

Each new measurement is compared with previous ones

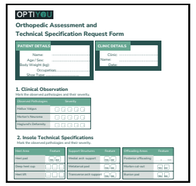
Parametric Design with Digital Data



The “Insole Image Processing System” digitally identifies the insole and ensures a precise fit.

With 3D foot scanning, the algorithm identifies key points.

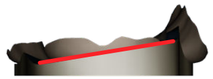




Using plantar pressure data, an orthopedic insole matched to the person's biomechanics is designed and produced.

Orthosis design form – the insole design is optimised with expert guidance.





In this example the heel shows varus (inward tilt), so the expert chose a heel wedge.

With digital tracking, every new measurement is compared with previous ones. Periodic measurements every 6–12 months evaluate the insole's effect, and the insole is re-optimised.

Target Users

Growing Children

Children needing support in foot development

- Flat foot / high arch tendencies
- In-toeing or out-toeing problems
- Healthy growth with orthopedic support

Orthopedic Use

Adults with gait and stance problems

- Flat foot / High arch
- Overpronation
- Diabetic foot
- Heel spur
- Hallux valgus

Workers & Labourers

Jobs that require long hours on foot

- Labour-intensive workers
- Healthcare workers
- Teachers
- Factory workers

Athletes

Athletes aiming to boost performance

- Individual athletes
- Team athletes

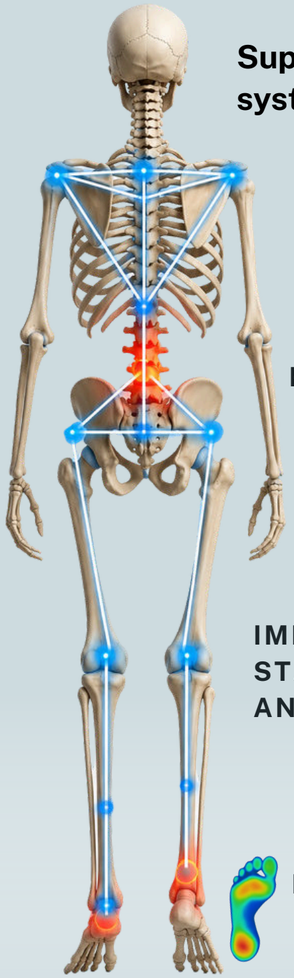
People Seeking a Better Quality of Life

- People with foot, back or muscle pain
- People with weight problems
- Those wishing to maintain foot health
- Those seeking a healthy, comfortable stride

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OPTIYOU

How We Support Biomechanics



Supports your entire skeletal system

REDUCES BACK & JOINT PAIN BY %30

IMPROVES FOOT STABILITY & REDUCES ANKLE SPRAIN RISK BY %10

REDUCES PEAK PLANTAR PRESSURE BY %48

Orthopedic Insole Designed Under Expert Supervision



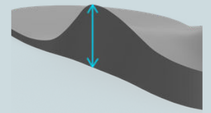


Perfect Anatomical Alignment

Data Driven Orthopedic Support



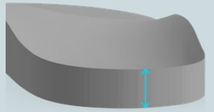
Pes Cavus/Planus



Arch Height



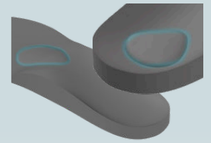
Achilles Tendinitis



Heel Cup Height



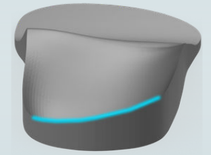
High Pressure in the Metatarsal and Heel



Metatarsal/Heel Pad



Varus/Valgus



Varus/Valgus Wedge

[1] https://doi.org/10.1007/s00586-004-0824-z
[2] https://doi.org/10.1016/j.promfg.2021.06.035.
[3] https://doi.org/10.1016/j.gaitpost.2019.09.023

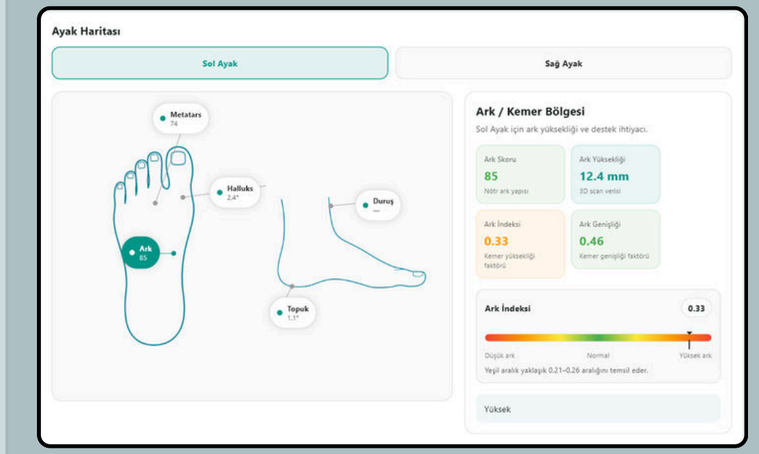
OPTIYOU

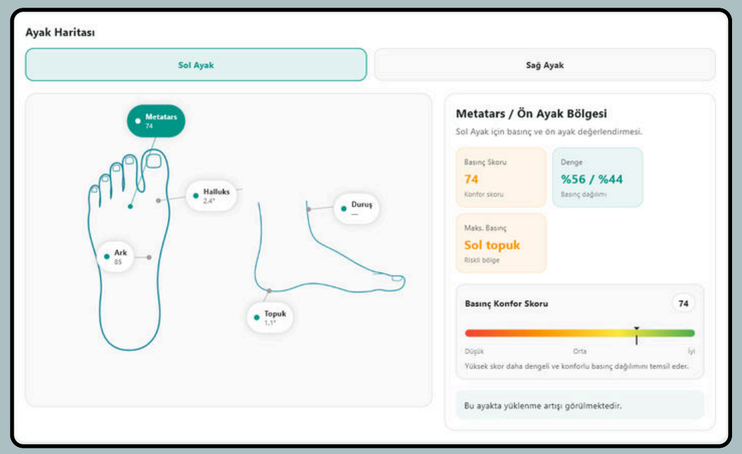
OPTIYOU Measurement Results

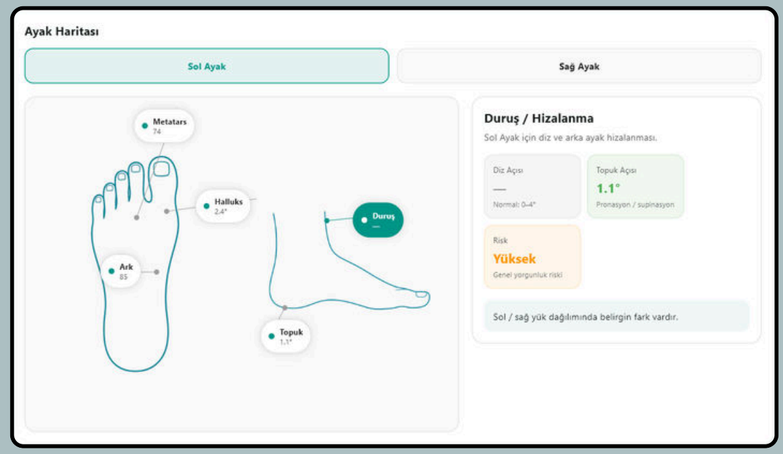
Measurement results accessed by end users on our site



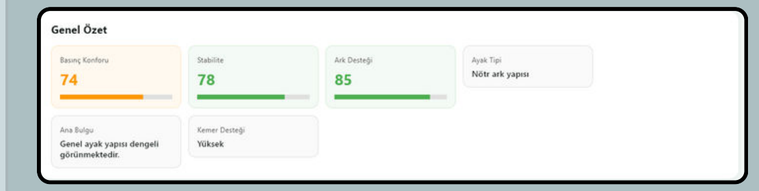
Patient foot scan summary: 73/100 score indicating load imbalance and insufficient arch support. Personalized orthotics recommended.







Comprehensive biomechanical evaluation: arch structure, plantar pressure distribution, and postural alignment analysis.



Detailed breakdown of foot health score across pressure comfort, stability, and arch support criteria.