

Xrota Auto-Scheduling Algorithm

A Guide for HR and Management

Overview

The auto-generate feature creates fair, balanced staff schedules that ensure proper coverage while respecting rest requirements and distributing weekend work fairly.

What It Does

For Each Staff Member, Every Week:

- Assigns exactly **37.5 working hours** (5 shifts x 7.5 hours)
- Gives exactly **2 days off** (consecutive when possible)
- Ensures **12 hours minimum rest** between shifts

For The Business:

- Maintains **1-2 staff coverage** at all times during opening hours (08:00-20:30)
- Allows up to **3 staff** during weekday mornings (08:00-16:30) for handovers
- Limits weekends to **maximum 2 staff** at any time

Fairness Rules

Weekend Rotation

- Only **1 person per week** gets the "golden weekend" (both Saturday AND Sunday off)
- The system tracks weekend shifts over a **10-week rolling period**
- Staff who have worked more weekends recently get priority for weekend days off

Shift Variety

- The system avoids giving anyone the same shift type repeatedly

- Mix of Early, Mid, Late, and Floating shifts throughout the week

Shift Types

Shift	Hours	Time	Notes
Early	7.5 hrs	08:00 - 16:30	Opens the business
Mid	7.5 hrs	10:00 - 18:30	Covers midday peak
Late	7.5 hrs	12:00 - 20:30	Closes the business
Floating	7.5 hrs	08:30 - 17:00	Fills gaps, flexible coverage

Note: Floating shifts are used to fill gaps and help staff reach their 37.5 hour target. They don't count toward coverage limits.

Rest Requirements

12-Hour Rest Rule:

- **No Late shift followed by Early shift** the next day (would be less than 12 hours rest)
- This also applies **across weeks** - a Late on Sunday means no Early on Monday the following week

How Days Off Are Assigned

1. The system tries to give **consecutive days off** (e.g., Tue-Wed, Thu-Fri)
2. One person each week gets **Saturday-Sunday off** (rotates fairly over time)
3. Maximum **2 staff off on any single day** to maintain coverage
4. If someone can't work weekends due to coverage limits, they get weekday days off plus a Floating shift to make up their hours

Warnings You Might See

Warning	What It Means
"Days off are not consecutive"	Staff has 2 days off but they're split (e.g., Mon and Sat)
"Only X hrs assigned"	Staff couldn't reach 37.5 hours due to constraints
"Coverage gap"	A time slot has no staff coverage
"Too many staff"	More than 2 staff scheduled at the same time

Tips for Best Results

- **Generate 10 weeks at once** for better weekend balancing across the period
- **Review warnings** by clicking the summary banner after generation
- **Manually adjust** any individual shifts by clicking on cells in the schedule

- **Use Staff Preferences** to set preferred days off or shift types for individual staff

Xrota Staff Scheduling System

Document generated: 20/01/2026