# PMW3901 Pattern Recommendations

## Best Patterns for PMW3901:

1. Jittered Dot Grid - Best overall performance
   - Semi-regular spacing prevents repetition issues
   - High contrast dots are easy to track
   - Works well at various heights (10cm - 1m)

2. Random Circles - Excellent for varied lighting
   - Non-repetitive pattern
   - Good feature density

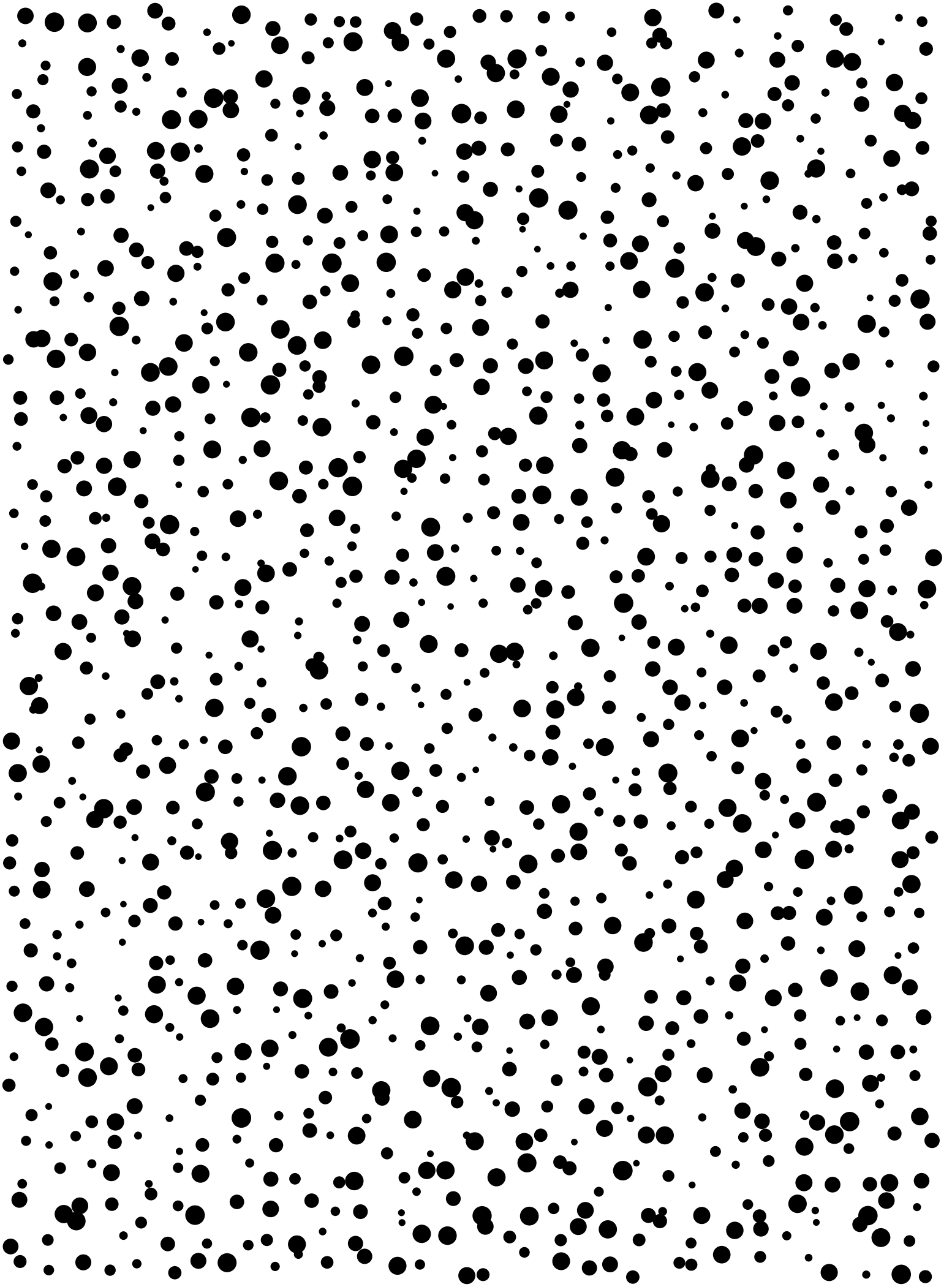
3. High Frequency Pattern - Maximum precision
   - Best for low altitude (< 30cm)
   - Dense features for fine movement detection

## General Guidelines:

- Print Pattern: Use matte finish to avoid reflections
- Contrast: Black on white works best
- Avoid: Perfectly regular grids or repetitive patterns
- Scale: Features should be 3-20mm for optimal tracking
- Lighting: Ensure even illumination, avoid shadows
- Height: Sensor works best 10cm - 80cm above pattern

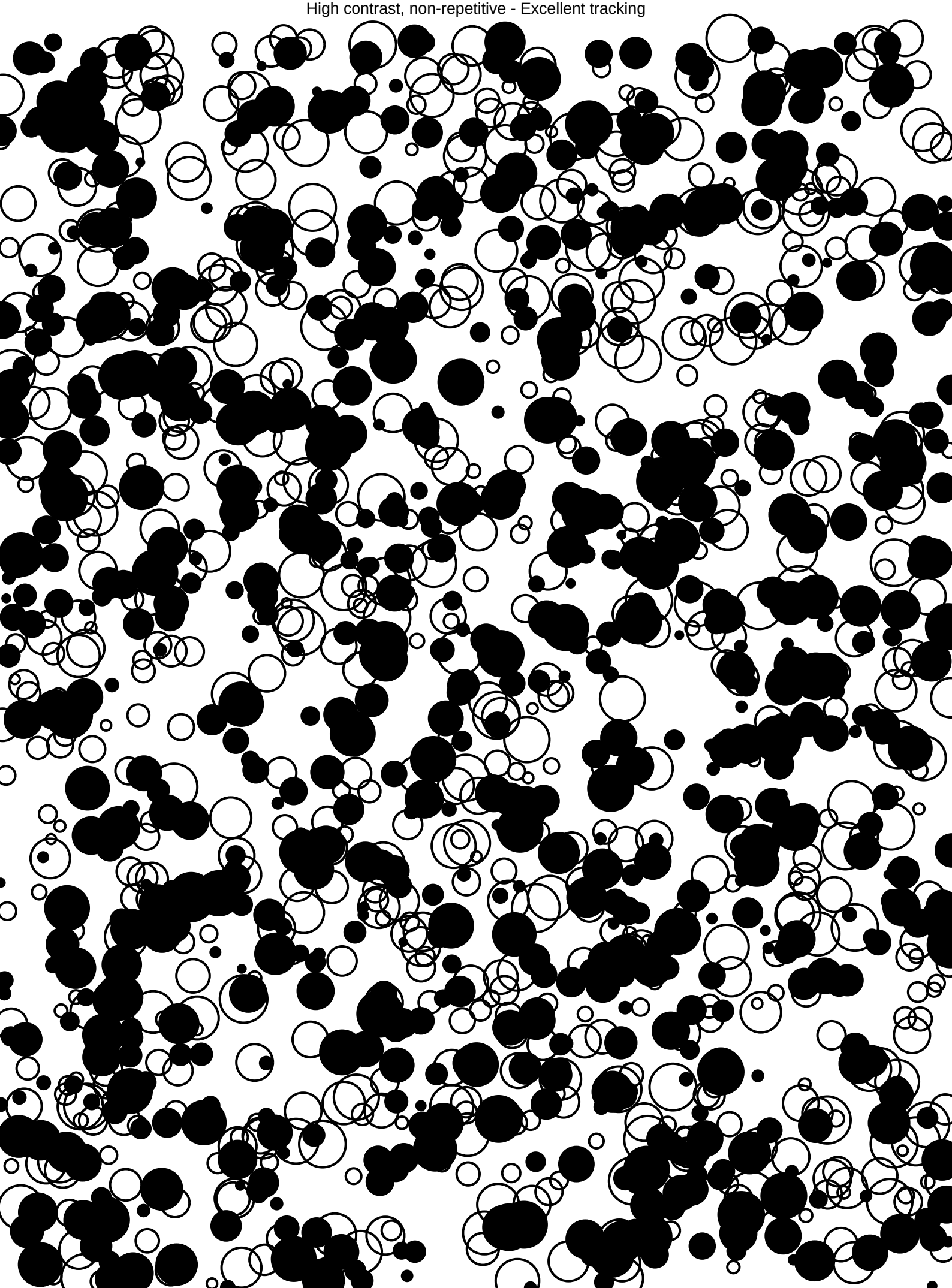
# Jittered Dot Grid

Semi-regular dots with position variation - Optimal balance



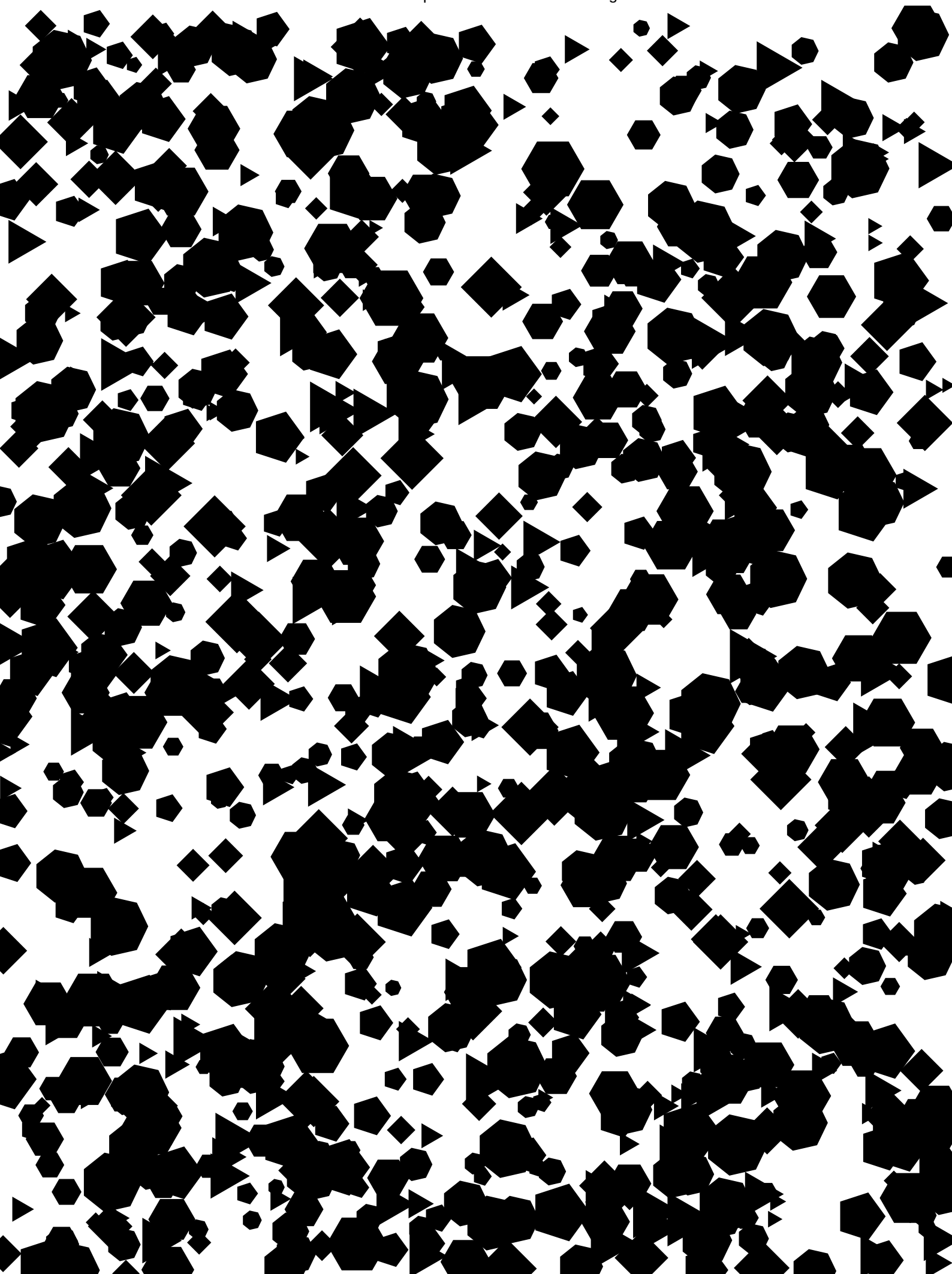
# Random Circles Pattern

High contrast, non-repetitive - Excellent tracking



# Random Polygons Pattern

Variable shapes - Great feature tracking

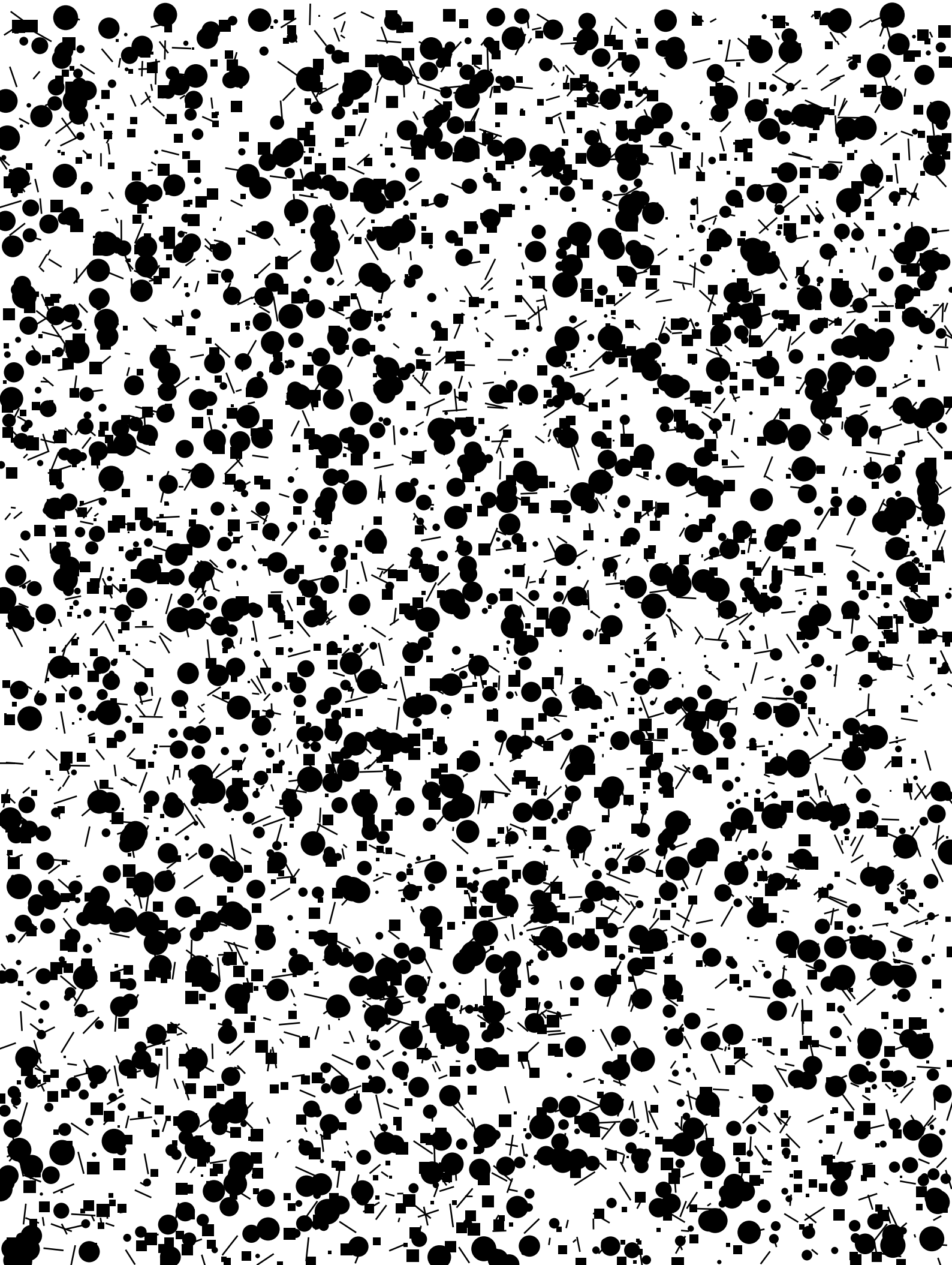


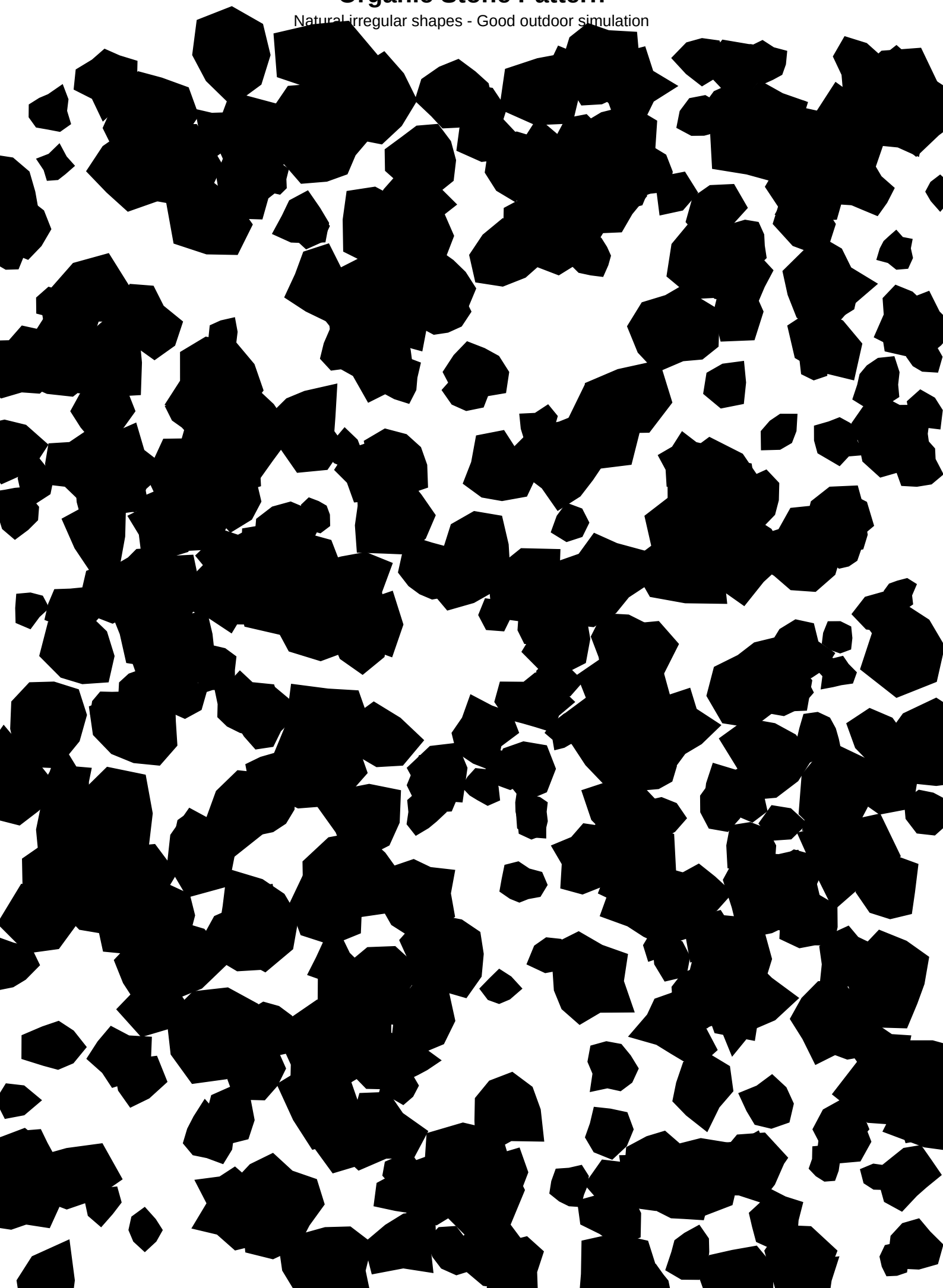
# Irregular Checkerboard

Variable sized squares - Good for orientation tracking

# High Frequency Pattern

Dense random features - Maximum feature density



# Organic Stone Pattern

Natural irregular shapes - Good outdoor simulation