

# **Intergalactic Riksbanken Chip Authenticator - Screenshots**

**Group 8**

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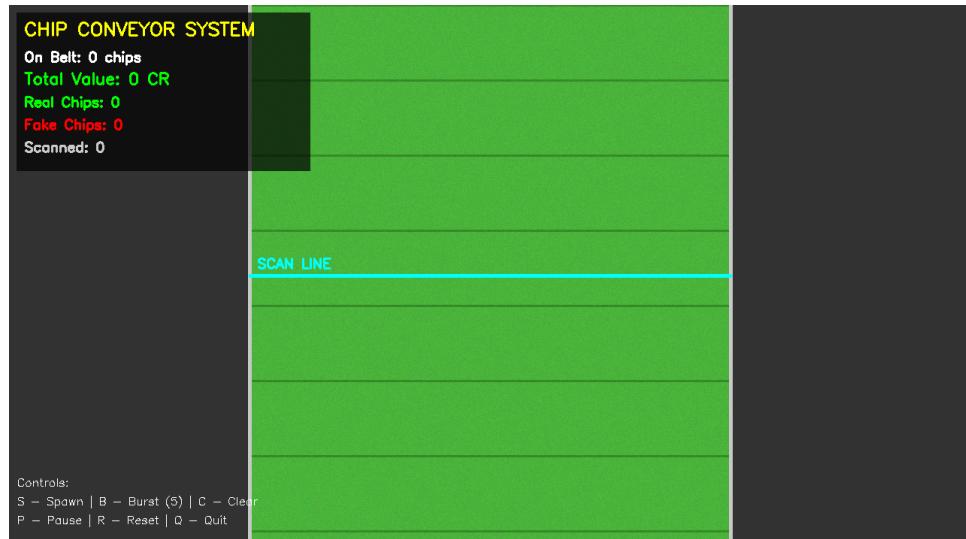


# Project Screenshots

## Intergalactic Riksbanken Chip Authenticator

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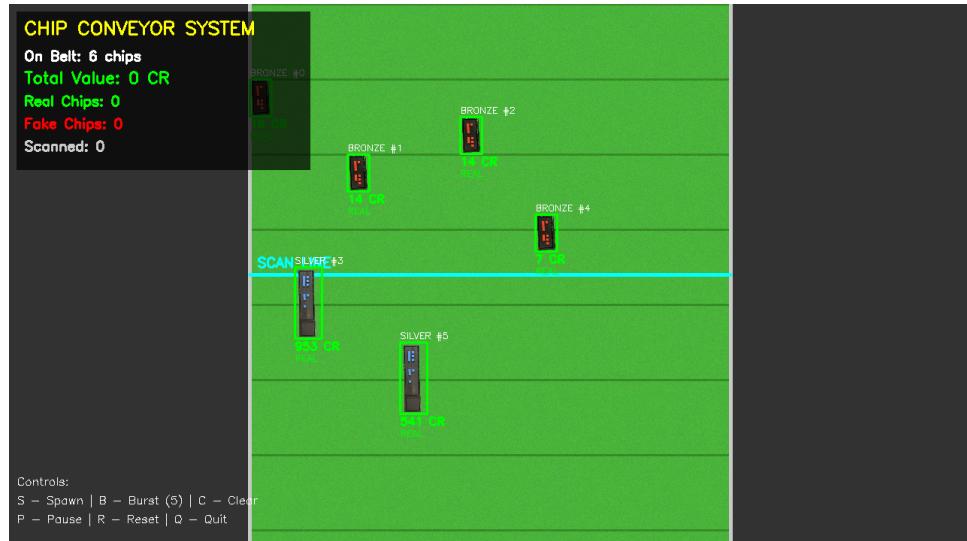
### 1. Empty Conveyor Belt



*Empty Conveyor*

The initial state showing the green conveyor belt (50% screen width, centered) with scan line and statistics panel.

### 2. Multiple Chips in Motion



*Multiple Chips*

Several chips moving down the conveyor belt. Shows mix of Gold, Silver, and Bronze chips with real-time value calculation and statistics tracking.

### 3. Gold Chip Detection

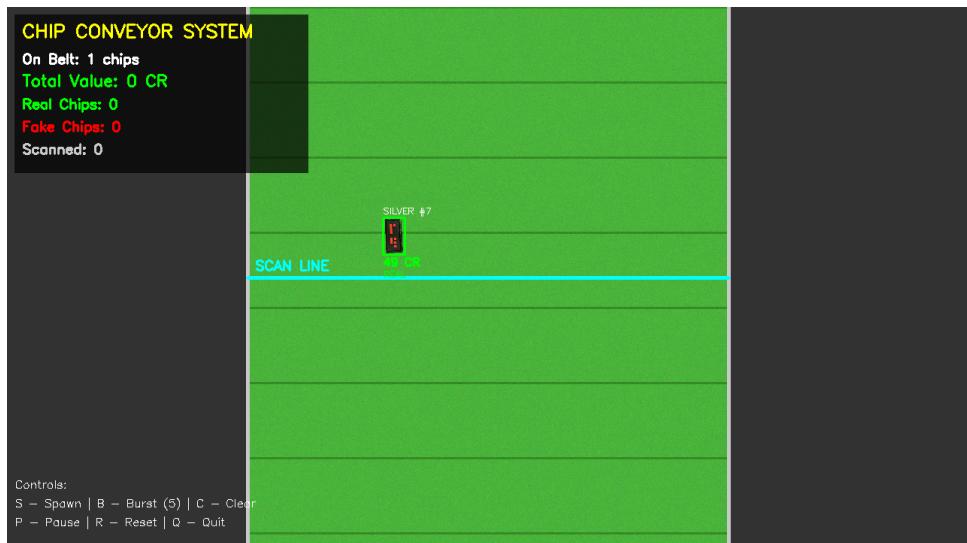


*Gold Chip*

Individual Gold chip with:

- Yellow color coding
- 3-digit number display
- Value calculation: digits  $\times$  10
- Real-time annotation

#### 4. Silver Chip Detection

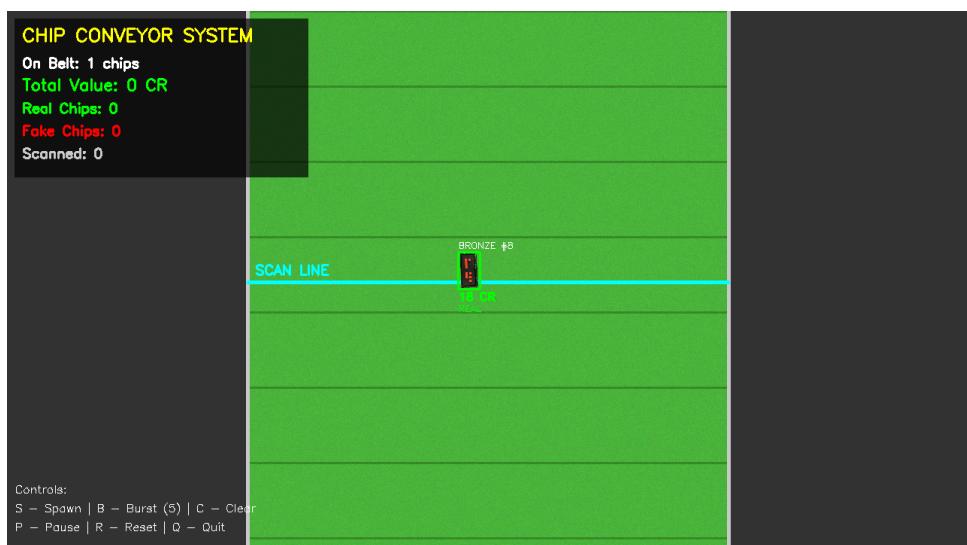


Silver Chip

Silver chip showing:

- Gray color coding
- Direct 3-digit value
- Bounding box in green (authentic)
- Value display in CR (Credits)

#### 5. Bronze Chip Detection



Bronze Chip

Bronze chip with:

- Orange color coding
- Multiplied digit value
- Position on conveyor belt
- Authenticity marker

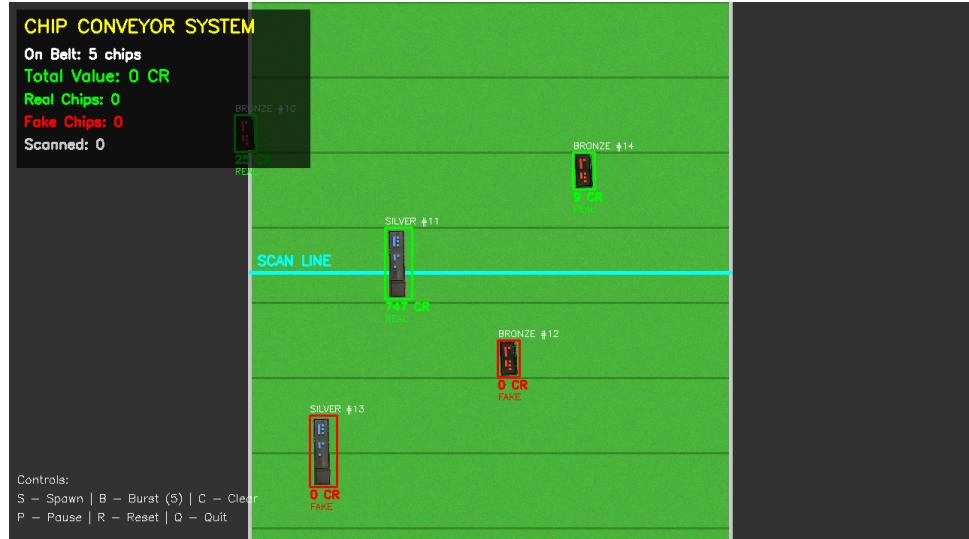
## 6. Fake Chip Detection



Counterfeit chip identified by:

- Red bounding box
- "FAKE" label
- Zero value (0 CR)
- Not counted in total value

## 7. Full Simulation



*Full Simulation*

Complete system demonstration showing:

- Multiple chip types simultaneously
- Real-time statistics panel (top-left)
- Total value accumulation
- Real vs Fake count tracking
- Control instructions (bottom-left)
- Scan line in center
- FPS display

## System Features Demonstrated

- **Color-coded Detection:** Gold (Yellow), Silver (Gray), Bronze (Orange), Fake (Red)
- **Real-time Processing:** 60 FPS in simulator mode
- **Value Calculation:** Automatic computation based on chip type
- **Statistics Tracking:** Live total value and chip counts
- **Visual Feedback:** Clear annotations and status indicators
- **Conveyor Physics:** Realistic perpendicular movement

## Technical Details

- **Resolution:** 1280 × 720 pixels
- **Belt Width:** 640 pixels (50% of screen)
- **Processing:** OpenCV + NumPy
- **Color Space:** HSV for robust detection
- **Alpha Blending:** PNG transparency support

**Project:** STB600 Final Project 2025

**Group:** 8

**Members:** Suneela, Sara, Abhishek