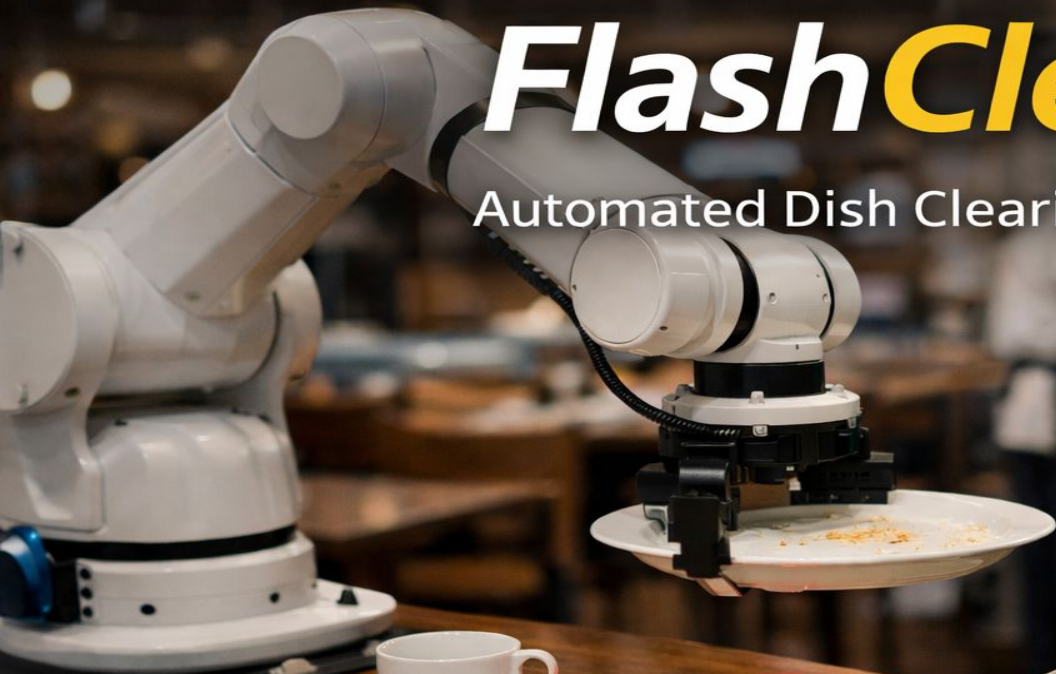
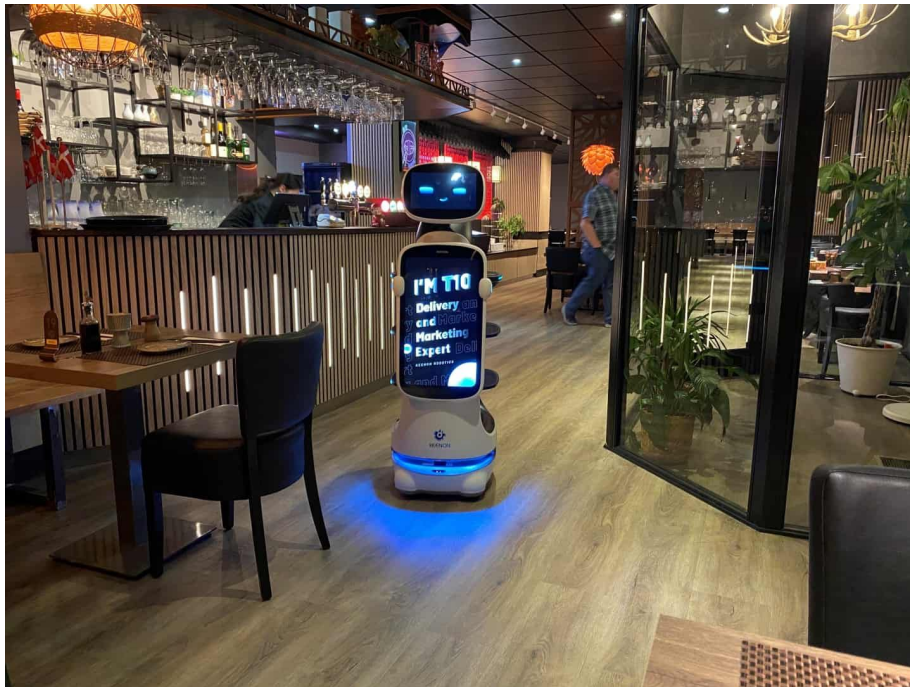


# *FlashCleaner*

Automated Dish Clearing Robot System



# Problem & Existing Solution



shutterstock.com · 1566133222



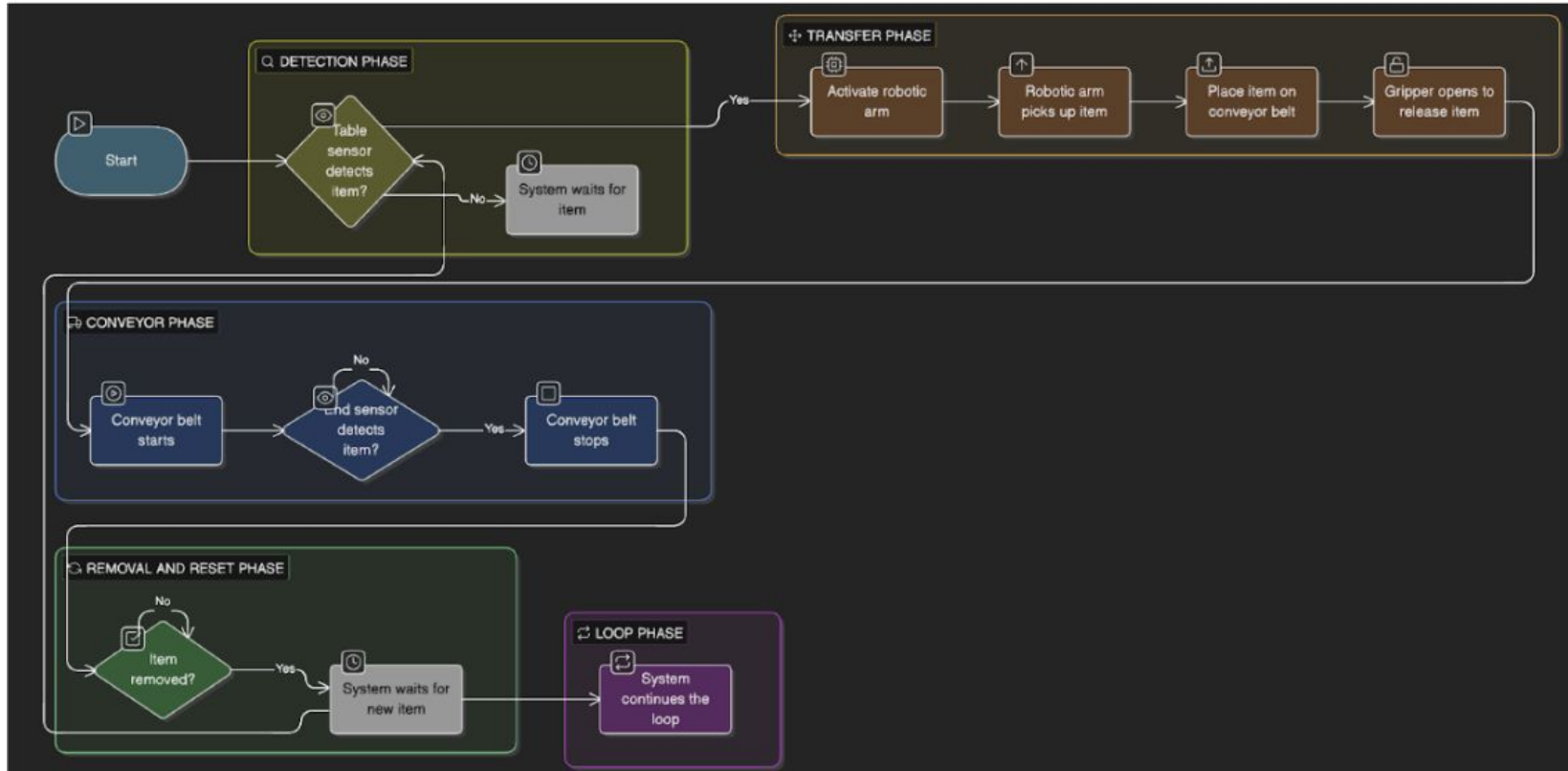
# Løsning



# Video

<https://www.youtube.com/shorts/0o5gSR4LZqY>

# Flowchart



# UR Script – Programlogik

**▶ OPSTART (AUTO)**

- TCP / Payload
- Sikkerhed
- OnRobot URCap

**📍 WAYPOINTS**

- W1: Start / Safe
- W2: Pick
- W3: Lift
- W4: Place (Conveyor)

**🔄 LOOP (while True)**

- Kontinuerlig drift
- Klar til næste tallerken

**🏠 CONVEYOR (I/O)**

- Output 7 → Start bånd
- Input 4 → Endesensor
- Output 7 → Stop bånd

**➡ LOOP (while True)**

**📡 SENSOR / BRANCHING**

if PE\_100mm = True

- Objekt registreret
- else
- Vent

**🏠 PICK & PLACE**

- MoveJ → Pick
- RG Grip → Grib
- MoveL → Lift
- MoveJ → Transport
- RG Grip → Slip



**⏸ SIKKER VENTELOGIK**

- Vent på sensor
- Ingen unødige bevægelser

- URScript • Waypoints • Loops
- Branching (if / else) • Boolean logic
- Sensorstyring • Industriel automation

# GUI Og Sikkerhed - Elias

GUI -

System Login + Database Clear log Recreate DB

Login

Login

Username

fx: admin

Password

fx: admin

Login

Tip: Hvis DB ikke findes, oprettes den med admin.

Når du er logget ind: Robot-tab vises. Admin ser også Users + Database.

Admin login -

System Login + Database Logout Clear log Recreate DB

Robot Users Database

Create user (admin)

Username

Password

☐ Admin user?

Create user

Log

26-01-21 14:17:50 | Logged out.  
26-01-21 14:17:53 | elias logged in.  
26-01-21 14:18:50 | Logged out.  
26-01-21 14:18:53 | admin logged in.

Når du er logget ind: Robot-tab vises. Admin ser også Users + Database.

Normalt login -

System Login + Database Logout Clear log Recreate DB

Robot

Robot kontrol

Her skal du koble din robot-kode på. Start med er

Run robot program (placeholder)

(Du kan også tilføje flere knapper, dropdowns, par

Log

26-01-21 14:17:50 | Logged out.  
26-01-21 14:17:53 | elias logged in.  
26-01-21 14:18:50 | Logged out.  
26-01-21 14:18:53 | admin logged in.  
26-01-21 14:21:21 | Logged out.  
26-01-21 14:21:24 | elias logged in.

Principle of least priv

Defense in depth

# DATABASE

SystemLogin

System Login + DatabaseLogoutClear logRecreate DB

RobotUsersDatabase

Create user (admin)

Username

elias

Password

•••••

☐ Admin user?

Create user

Log

WHERE

ORDER BY

	Username	Salt (UUID with time-low and time-high swa...	SaltedPasswordHash
1	admin	9abbbd51-b2f9-4f0c-d598-d67fb8a8f283	0x0356173965030FF83BDB787E592C898EE6AB2528232262C5CF...
2	user	87e474fd-c5e5-412a-88fe-e97e3a2def92	0xFA1FB3F5E63FC0CB1A7D66A72FA2F3C051F138E8E373D08CFF3...
3	IsmaelHaiba	3c61dc53-7096-4b7d-ed79-f970bfd55394	0xAB3FFED731C33F1ED49FCB783895E10F7013CE4B89BCSF9E17...
4	elias	af1648a4-7644-56dc-398b-b77575ea2d95	0x6C90F662196B6F1E3DA13FBD4EAB0808F4E5061837DFB28835...

4 rows