PROGRAM ROBOTS IN MINUTES
NO-CODE. NO-CAD. HIGH-ROI.

AUGMENTUS
ROBOTICS SIMPLIFIED
A team with deep expertise in robotic automation

**Founders**

- **Yong Shin**
  - CEO
  - Technology Lead at A*STAR, led scientists and engineers in industrial solutions

- **Daryl Lim**
  - COO
  - Ex-Founder of Edge Neo, Leading edge computing startup

- **Voon Foo**
  - CTO
  - Prolific Robot Developer, Leading robot algorithm expert

**Advisors**

- **Nalin Advani**
  - Ex-CEO of GreyOrange, AI-robotics startup which raised US $180M

- **Joyce Law**
  - Ex-Sales Head of Unity3D, world’s leading development engine which raised US $1.3B
Difficulty and long downtimes in conventional robot programming

- **Teach pendant**
  - **Teach by demonstration (Lead-through)**
  - Speedup 750%

**High Expertise Required**
Highly trained experts needed to operate industrial robots

**Heavy Fragmentation**
Different robot OEMs have different programming languages

**Long Downtime**
Average 4 - 6 weeks of downtime for programming

Technovio, 2019
McKinsey & Company, 2017
Difficulty and long downtimes in conventional robot programming augmentus.tech
A global labor shortage is pushing more firms towards automation.

Shortage of > 2 million US manufacturing workers by 2030

Forbes, 2022
McKinsey & Company, 2017
Simplifying Robotics

Downloadable iOS app
CI/CD, portability and commercialization

A*STAR Spin-off

A ROCKWELL AUTOMATION PARTNER

Augmentus
AUGMENTUS Use Cases

- Polishing
- Inspection
- Sanding
- Welding
- Spraying
- Media Blasting
Used by the **leading** manufacturing companies

**Clients:**
- ST Engineering
- HYUNDAI Motor Group
- DJK
- MIL
- Johnson & Johnson
- P&G
- ABB
- Fujitsu
- Meril
- Sfas
- Delta Technology
- Robotnik
- SpeiseTech

**SI Resellers:**
- DJK
- Sfas
- ZTEC
- Autoline
- Infinity Robotics

**Tech Partners:**
- Rockwell Automation
- ABB
- Universal Robots
- MITSUBISHI Electric
- TM Robot
- Agency for Science, Technology and Research (A*STAR), Singapore
- A*STAR Institute for Infocomm Research
- A*STAR Institute for Manufacturing Engineering
- A*STAR Institute for Manufacturing Technology
Augmentus & ROS Collaboration

AI-based pick-&-place of FMCH SKU

Augmentus focus was AI model generation with inbuilt annotation and cloud-based training

Object frame calculation for Rviz

Augmentus to provide coordinate frames of components within 3D scan of robot cell
Augmentus & ROS Collaboration

Object frame calculation for Rviz

Robot localization

Coordinate calculation
Augmentus using ROS for validation

- Used ROS to validate kinematics and motion planning of robots in initial stages
- But the open-source materials were occasionally incorrect
- Often lead to situations where intensive troubleshooting were needed
- Urge for official URDF repository that have been validated
Next Step

Upgrade Scan-&-Plan for high precision applications: Looking for R&D Partnership
Open to Collaborations

Develop proprietary property in ROS environment
- Algorithm
- Process
- System

Deployment interface via Augmentus (end user)
- Reprogramming/ finetuning
- Coordinate frame calculation
- API library – inject custom functions
- Connectivity via TCP/IP, FTP, Restful
Join us in making
#RoboticsSimplified

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