



# PONGSARUN TISUWAN

## Web Developer

Aug, 28th 2002 (23 years)

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## ABOUT ME

I am a hybrid engineer who creates seamless interactions between physical devices and digital interfaces. My work spans the full hardware to software stack from designing custom PCB and embedded systems to crafting the web and mobile apps that control them.

## EDUCATION

**Bachelor of Engineering** **2021 - Present**  
**in Electronics and Computer System Engineering**  
Faculty of Engineering, Silpakorn University / GPAX 2.90

## EXPERIENCE

**Computer Vision in Robotic Zen Garden Systems:** **Dec 2024 - Jun 2025**  
**An Embedded Approach for Contour Detection and Pattern Generation**

Silpakorn University

- Embedded Robotics: Built an automated gantry robot to generate dynamic sand patterns using real-time object detection.
- Computer Vision: Developed a Python/OpenCV pipeline on Raspberry Pi for real-time contour detection and morphological processing.
- Algorithm Design: Engineered trajectory algorithms using Cubic Spline interpolation to convert visual data into smooth motor paths.

**IoT Developer Intern** **May - Jun 2025**

T.W.O. Engineering

- Requirements Gathering: Collaborated with clients to identify project requirements and define technical specifications.
- On-site Troubleshooting: Resolved immediate technical issues and adaptable challenges during on-site operations.
- System Configuration: Gained hands-on experience in configuring and commissioning PLC and HMI systems in real-world industrial environments.
- Team Collaboration: Worked effectively within a cross-functional team to achieve project milestones.

## CERTIFICATIONS

- Mobile Web App with HTML, CSS ,Javascript, Bootstrap and PHP.
- How to use PLC and HMI for industrial automation.
- Android Mobile Application with Flutter.