

THITIPAT PENGRUEAN

Principal Software Engineer

PROBLEM SOLVER / SYSTEMS THINKER / BUILDER

"I start with the problem — not the technology."

Ten years across semiconductor manufacturing and software — turning factory-floor problems into practical systems, from paper records to machine data and AI-assisted decisions.



01 EXPERIENCE

MICROCHIP TECHNOLOGY (THAILAND)

2016 — Present

Principal Software Engineer · 2025 — Present

Process Engineer (2016) → software engineering → Principal Software Engineer (2025)

- Initiated E-Record in 2018 and owned it end to end — discovery, requirements, solution design, build, deployment and support.
- Coordinated IS (servers), data owners and equipment engineers to connect machine data with production workflows.
- Rolled systems out across TH1, TH2 and a new plant in the Philippines; grew from solo delivery to a team of three.

02 SELECTED IMPACT

E-RECORD

PRODUCTION

TH1 → TH2 → PH

Replaced paper production records with connected electronic workflows, station by station, plant by plant. Most Assembly records are now electronic.

E-MAPPING

PRODUCTION

Connected equipment strip-map data to operator workflows — unit-level traceability instead of paper fail/reject maps.

MSOM

PRODUCTION

Connected planning, material and Assembly WIP context to support shortage and planning decisions.

AI ASSISTANCE

DEMONSTRATED

Internal AI assistance for engineering knowledge. One demonstrated Failure Analysis workflow: 3+ hours → about 5 minutes.

NEXT · IN PILOT — production planning where AI suggests and the planner decides.

03 CAPABILITIES

UNDERSTAND

people, context, constraints

CHALLENGE

assumptions, symptoms, root causes

CONNECT

teams, processes, equipment, data

BUILD & VALIDATE

deliver, support, improve

04 EDUCATION

Silpakorn University

B.Eng., Electronics and
Computer Systems
Engineering
2016

05 TECHNICAL

C# / .NET · ASP.NET · WPF
React · Next.js · TypeScript
Oracle · SQL Server · IIS · Docker
Local LLMs · workflow automation

06 CONTACT

pro.thitipat@gmail.com
GitHub ↗
LinkedIn ↗
thp-thitipat-cv.vercel.app



PORTFOLIO