SHOLSATAKORN WONGSING

Chiang Mai, Thailand
GitHub: @shrimpatk
website: www.swacorr.xyz

JUNIOR FULL STACK DEVELOPER

+66 63-343-0353 | mikey.swx@gmail.com

TECHNICAL SKILLS

LANGUAGES & TOOLS

- TypeScript, JavaScript, C/C++
- React / Next.js, NestJS
- GraphQL, PrismaORM, WebSocket
- Testing: Jest, Unit Testing

IOT & INFRASTUCTURE

- Arduino/ESP32
- MQTT, Node-RED, FreeRTOS
- PostgreSQL, InfluxDB

PROFESSIONAL SUMMARY

Self-taught developer with 12 months freelance experience, who evolved from web development to diverse technical domains. Started with modern web stack (NextJS, Express) and expanded into IoT systems and low-level programming. Successfully delivered multiple production systems including e-commerce platform and IoT monitoring solutions as a freelancer. Demonstrated ability to learn and implement new technologies while creating practical, efficient solutions for real clients.

EDUCATION

Tech Up Bootcamp (4 months)
Full Stack Development

Chiang Mai University 2019 - 2024
Bachelor of Arts (Digital Film)

KEY PROJECTS: IOT HOME MONITORING SYSTEM

OVERVIEW

A personal environmental monitoring solution built to solve real home automation needs. Started as basic sensor readings and evolved organically into a complete self-hosted system running on home infrastructure.

SYSTEM ARCHITECTURE

```
                    /--------> InfluxDB
Sensor -> MQTT -> Node-RED -> Websocket --|
Next.js Dashboard <- GraphQL <- NestJS <----|
```

KEY METRICS

- 60% reduction in data transmission overhead after MQTT migration
- Configurable throttling system (1s to 30s intervals)
- Sub-50ms dashboard update latency over local network

TECHNICAL HIGHLIGHTS

- Built end-to-end system with test coverage
- Implemented efficient data flow and storage systems
- Created responsive UI with real-time updates
- Managed self-hosted infrastructure

PROBLEM-SOLVING JOURNEY

1. Initial Challenge & Evolution

- *Started*: Basic Arduino console monitoring
- *Problem*: Needed data storage and visualization
- *Solution*: Built complete monitoring system

2. Performance Optimization

- *Identified*: HTTP causing high overhead
- *Research*: Studied MQTT for IoT communication
- *Result*: 60% reduction in data transmission overhead

3. Data Processing Pipeline

- *Setup*: Ubuntu server with MQTT broker (Mosquitto)
- *Built*: Node-RED flows for data transformation
- *Managed*: Time-series data with InfluxDB

4. Real-Time Implementation

- *Frontend*: Next.js dashboard with Recharts
- *Backend*: NestJS with GraphQL subscriptions
- *Features*: Live updates, data throttling, error recovery
- Testing: Unit tests for critical components

KEY PROJECTS: PJSOUND Ecommerce (NextJS, NestJS)

Link: www.pjsound.co.th *(Final Development Stage)*

OVERVIEW

A complete e-commerce solution for audio equipment retail.
Built with modern tech stack and focus on performance optimization.
Includes product management, admin dashboard, and data migration

TECHNICAL HIGHLIGHTS

- Implemented data migration from legacy system (750+ products)
- Built robust API system with proper error handling
- Created responsive admin dashboard with real-time updates
- Managed database with PrismaORM for type safety

PROBLEM-SOLVING JOURNEY

1. Data Migration Challenge

- Started: Legacy website with 750+ products
- Problem: Need to preserve product data.
- Solution: Built custom scraping system

2. System Architecture

- Frontend: NextJS for SSR SEO and performance
- Backend: NestJS with TypeScript
- Database: PostgreSQL with PrismaORM

ADDITIONAL PROJECT

POS DATA VISUALIZATION

Tech Stack: Express

• Built webhook endpoint for POS data reception
• Implemented data transformation pipeline
• Integrated with Google Sheets for client accessibility
• Created automated reporting system

Terminal Text Editor

Tech Stack: C99

- Built text editor from scratch using C and POSIX system calls
- Implemented efficient terminal handling and rendering
- Created robust memory management system
- Developed custom input processing system

HAND GESTURE VOLUME CONTROL

Tech Stack: Python MediaPipe

• Real-time volume control system using computer vision
• Implemented MediaPipe for hand tracking
• Used multi-threading for performance optimization
• Integrated system calls for volume control

PROFESSIONAL DEVELOPMENT

Self-Directed Learning

• Mastered multiple programming paradigms
• Learned systems programming fundamentals
• Developed IoT system architecture skills
• Acquired real-time system optimization techniques

Technical Growth

• Progressed from basic Arduino programming to full-stack IoT
• Advanced from HTTP to optimized MQTT implementation
• Evolved from basic to complex system architecture
• Developed performance optimization

EDUCATION

Chiang Mai University Bachelor of Arts (Digital Film) 2019 - 2024

PROGRAMMING BACKGROUND

• Tech Up Bootcamp (4 months)
• Self-taught through practical projects
• Continuing to learn and improve
• Focus on building useful things

WHAT I HOPE TO BRING

• Enthusiasm for learning
• Practical problem-solving experience
• Willingness to take on challenges
• Desire to contribute and grow