Chirawat Chitpakdee

294/900 IDEO condo Charan Sanitwong 70/2
Charan Sanitwong Rd., Bang Phlat district
Bangkok 10700
Mobile: (+66) 087-400-4666
Email: chirawat.ch@ku.th

Education

IELTS Academic: 6.0

- **M.Sc., Physical Chemistry**, Kasetsart University, Bangkok — *2011 (GPA 3.41)*
- **B.Sc., Chemistry**, Ubon Ratchathani University, Ubon Ratchathani — *2009 (GPA 3.05)*

Summary of Working Experience

- **Tech Lead Engineer (CP Axtra - Lotus's)** — *2022 – Present*
- **Digital Economy Promotion Officer (depa)** — *2021 – 2022*
- **Research Assistant (National Nanotechnology Center, NSTDA)** — *2012 – 2021*

Professional Summary

**"Tech Lead Engineer | AI, RPA & Automation Workflow Specialist
Driving Digital Transformation Through Intelligent Automation"**

Versatile automation engineer specializing in end-to-end business process transformation through cutting-edge technologies including Python, low-code platforms, and Agentic AI. Expert in designing and implementing intelligent automation solutions that streamline operations—from automated data reconciliation and real-time analytics to AI-powered chatbots (RAG) and API services. Proven track record in delivering measurable results through performance optimization, cost reduction, and scalable automation frameworks that transform routine processes into strategic advantages.

Technical Skills

Programming & Scripting

- **Proficient:** Python, FastAPI, Flask
- **Familiar:** REST APIs, PyAutoGUI, Selenium

AI & Large Language Models (LLM)

- **AI Engineering:** Hugging Face, LlamaIndex, LangChain, LangGraph, OpenAI, ChatGPT, Claude Code, Codex

- **LLM Deployment:** Open source LLM, vLLM, SGLang (inference optimization)
- **AI Integration:** Model Context Protocol (MCP) for AI agent function calling and tool integration
- **Expertise:** Question-answering systems, Retrieval-Augmented Generation (RAG), LLM fine-tuning for domain-specific knowledge, LLM-based data cleansing
- **Research:** Multi-agent AI systems and creative LLM applications for business use cases

Machine Learning & Data Science

- **ML Libraries:** TensorFlow, Keras, Scikit-learn, PyTorch
- **Classical ML Models:** Logistic Regression (LR), Decision Tree (DT), Random Forest Regressor (RFR), Support Vector Machine (SVM), Gaussian Process Regression (GPR), K-Nearest Neighbors (KNN)
- **Data Analysis:** Pandas, NumPy, SciPy, Matplotlib
- **Statistical Tools:** statsmodels, Data Studio

Automation & RPA

- **RPA Development:** Python-based robotic automation for financial and business processes
- **Low-Code Platforms:** Power Automate, Cloud Flow (Microsoft), Make.com, n8n
- **Testing Automation:** Playwright, Selenium, PyAutoGUI
- **Tools:** BizRen, Pandas for workflow automation and data entry streamlining

Cloud & DevOps

- **Cloud:** AWS, Tencent
- **Containerization:** Docker
- **CI/CD:** Jenkins for continuous integration and delivery pipelines
- **Performance Testing:** Apache JMeter, K6 for load testing and performance monitoring
- **Monitoring & Visualization:** Grafana for real-time database monitoring and dashboard creation

Databases

- **SQL:** PostgreSQL, SQL Server, MSSQL
- **NoSQL:** MongoDB

Data Engineering & Orchestration

- **Workflow Orchestration:** Apache Airflow for data pipeline automation and ETL processes
- **Data Pipeline:** Design and implementation of scalable data workflows

Computational Chemistry (Research Background)

- **Methods:** Density Functional Theory (DFT), ML for materials prediction
- **Software:** VASP (Vienna Ab initio Simulation Package)

Publications & Technical Writing

Medium Articles

- **"LLM Inference Engines Performance Testing: SGLang VS. vLLM"** (2024)
    - Comprehensive performance benchmarking of modern LLM inference engines
    - Link: https://medium.com/@occlubssk/llm-inference-engines-performance-testing-sglang-vs-vllm-cfd2a597852a

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Work Experience

Tech Lead Engineer

CP Axtra - Lotus's | *2022 – Present*

Responsibilities:

- Lead the design and implementation of automation solutions for business process optimization
- Architect and develop RPA workflows and intelligent automation systems
- Build and deploy AI-powered applications including RAG-based chatbots with MCP integration and API services
- Design, deploy, and maintain enterprise AI API services and AI server infrastructure for organization-wide LLM deployment
- Provide expert consultation for AI application development across departments, including LLM-based data cleansing solutions for Data Science teams
- Setup and manage automation infrastructure including Power Automate machines, Linux servers with Cronicle scheduler for Python RPA, and AI servers for LLM deployment
- Drive digital transformation initiatives across multiple business units
- Mentor junior engineers and establish best practices for automation development
- Collaborate with stakeholders to identify automation opportunities and deliver scalable solutions
- Manage end-to-end project delivery from requirements gathering to production deployment

Key Achievements:

AI & LLM Infrastructure:

- **Pioneered Open Source LLM Infrastructure:** Initiated and deployed enterprise-grade Open Source LLM platform as OpenAI-compatible API services across CP Axtra organization (Lotus's and Makro), enabling business units to leverage AI capabilities without vendor lock-in
- **Multi-Model LLM Deployment:** Successfully deployed and maintained 5+ state-of-the-art open source models including Gemma (Google), Meta-Llama, Qwen, GLM4.5, and Typhoon (SCB), providing flexible model selection for diverse use cases
- **Cross-Functional AI Adoption:** Led development of RAG-based chatbot for customer service FAQs and knowledge management, while enabling data cleansing workflows for Data Science teams

RPA & Automation Pioneer:

- **First RPA Implementation:** Pioneered RPA and automation initiatives in CP Axtra using Python and Power Automate, establishing the foundation for organization-wide automation adoption
- **Cost Optimization:** Reduced RPA licensing costs by 500K baht by transitioning from UiPath to Python-based and Power Automate solutions
- **Large-Scale Data Automation:** Automated daily data reconciliation from 2,500+ databases (MSSQL & Oracle) to PowerBI dashboards, eliminating manual processes
- **Performance Optimization:** Initiated Python multiprocessing techniques achieving 100% CPU utilization and trained RPA team members on implementation

Backend API & Infrastructure Development:

- **API-First RPA Approach:** Transformed RPA processes by implementing backend API integration instead of frontend web crawling, improving reliability and performance
- **Serverless API Development:** Designed and deployed scalable FastAPI backend services on AWS Lambda with DynamoDB, enabling robust automation workflows
- **Advanced Algorithms:** Developed data cleansing algorithms and semantic string-matching system with similarity scoring (0-100) for customer data quality improvement

Infrastructure & Deployment:

- **RPA Infrastructure Setup:** Established Power Automate machine infrastructure for low-code RPA deployment, enabling scalable automation across business units
- **Linux Server Orchestration:** Configured Linux servers with Cronicle scheduler for automated Python RPA job management and execution
- **AI Server Deployment:** Setup and configured AI servers for enterprise LLM API services, supporting multiple open-source models in production
- **Data Pipeline Orchestration:** Implemented Apache Airflow for data pipeline automation and ETL workflow management, streamlining data processing operations

- **Chatbot Application Deployment:** Successfully deployed and maintained RAG-based chatbot applications for end-user consumption

Performance Testing & Monitoring:

- **Automated Testing Framework:** Implemented automated performance testing system on Jenkins using JMeter and K6, streamlining QA processes
- **Real-Time Database Monitoring:** Developed Grafana dashboards for real-time database monitoring, enabling proactive issue detection and performance tracking
- **Proactive Monitoring:** Initiated comprehensive notification system for database monitoring with MS Teams and Email alerts within RPA workflows

Knowledge Leadership:

- **AI Literacy Advocacy:** Provided expert consultation for AI application development and promoted AI literacy throughout the organization
- **Team Enablement:** Conducted knowledge-sharing sessions on API performance testing for Dev/QA teams and Power Automate Desktop training for company-wide adoption

Digital Economy Promotion Officer

depa (Digital Economy Promotion Agency) | *2021 – 2022*

Responsibilities:

- Promoted digital economy initiatives and supported SMEs in adopting digital technologies to enhance competitiveness
- Developed and delivered digital skills training programs for workforce development across various levels
- Drove smart city initiatives by implementing technology and innovation solutions to improve urban management and quality of life
- Supported digital startup ecosystem through mentorship and resource provision
- Organized workshops, seminars, and provided technology consulting to students, entrepreneurs, and the general public

Research Assistant

National Nanotechnology Center, NSTDA | *2012 – 2021*

Responsibilities:

- Conducted computational chemistry research using DFT and ML for materials design, catalyst prediction, and property optimization
- Investigated photophysical properties of organic materials for renewable energy applications (DSSCs, OLEDs)
- Developed theoretical models for catalytic systems and CO_2 electrochemical reduction
- Presented research findings at international scientific conferences and delivered lectures in computational chemistry workshops

Key Achievements:

- Published 17+ peer-reviewed articles with 335+ citations (h-index: 11) in international journals
- Developed ML-based predictive models for catalyst performance and material property screening
- Presented at 10+ international conferences including EMRS2019 (Nice, France - oral), WATOC2017 (Munich, Germany), and multiple PACCON, ANSCSE, and NANO THAILAND conferences
- Led breakthrough research in selective catalytic reduction using Ru-doped CeO_2 (44 citations) and metal-doped materials for CO_2 reduction (36+ citations)
- Served as VASP computational software lecturer at Summer School workshops, training researchers in DFT methods

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Key Projects

Finance RPA Automation Platform

- **Description:** Designed and developed comprehensive RPA automation platform handling 80+ workflows for Finance and Accounting departments, automating critical processes including bank statement reconciliation, payment processing, transaction verification, and invoice management
- **Core Capabilities:** Auto-download reports/statements from multiple sources, multi-database reconciliation (2,500+ databases), web form automation, file upload/download (SharePoint, SFTP), automated notifications (Email, MS Teams), transaction and invoice validation
- **Technologies:** Python, Power Automate, MSSQL, Oracle, SharePoint
- **Impact:** Eliminated manual data entry across 80+ finance workflows, reduced reconciliation time from days to hours, improved data accuracy for daily PowerBI dashboards

Enterprise AI & LLM Infrastructure

- **Description:** Led end-to-end implementation of enterprise AI infrastructure including LLM API services, AI server maintenance, and intelligent chatbot solutions across multiple business units
- **Key Solutions:**
  - Customer service AI agent with MCP-enabled function calling (user profile lookup, coin balance checks, FAQ responses)
  - RAG chatbots for Finance (process approval) and Accounting (SQL agent for data queries)
  - LLM-powered data cleansing pipeline for Data Science teams
- **Technologies:** Python, FastAPI, vLLM, SGLang, LangChain, MCP, Gemma, Meta-Llama, Qwen, GLM4.5, Typhoon
- **Impact:** Enabled AI adoption across organization, reduced data cleansing time by 70%, deployed internal customer service agent serving enterprise users

Data Reconciliation & Service Monitoring System

- **Description:** Built enterprise-scale data reconciliation and service monitoring platform using Apache Airflow, managing 100+ DAGs for critical business operations including inventory management, payment processing, sales tracking, and system health monitoring
- **Key Workflows:** SOH (Stock-On-Hand) reconciliation, RMS-SIM data comparison, payment gateway monitoring (2C2P, True Money, Grab), promotion and pricing synchronization, product master data validation, transaction monitoring across all store formats
- **Technologies:** Python, Apache Airflow, MSSQL, PostgreSQL, Oracle, Grafana, SharePoint
- **Impact:** Automated monitoring of 100+ critical business processes, proactive issue detection through real-time alerts, ensured data consistency across enterprise systems

Enterprise API Performance Testing Framework

- **Description:** Established comprehensive performance testing framework for enterprise backend API services, ensuring scalability and reliability across mission-critical systems
- **Services Tested:** Coin balance system, workforce management, cloud migration services, cash office operations, tax invoice processing, shopping mission platform, register services, tax online system, notification APIs
- **Technologies:** Apache JMeter, K6, Jenkins, Grafana, Python
- **Impact:** Identified and resolved performance bottlenecks pre-production, ensured API reliability under high load, established performance benchmarks for enterprise services

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Languages

- **Thai:** Native
- **English:** Professional working proficiency (IELTS Academic: 6.0)