

Vitchakorn Poonyakanok, MD, MS

Physician & Clinical Data Analyst

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Professional Profile

Physician-technologist working at the intersection of frontline clinical practice and data science — a bridge between the two worlds. I turn clinical and public-health problems into working software and analytics: a deployed altitude-risk decision-support app ([altit.app](#)), field outbreak investigations, predictive clinical models, and edge-AI health devices. I bring clinical credibility to data and engineering teams, and engineering rigour (ML, data governance, interoperability, cybersecurity) to health systems.

Education

- Aug 2026 – 2028 **M.S. in Health Care Analytics & Information Technology (MSHCA)**, *Heinz College, Carnegie Mellon University*, Pittsburgh, PA, USA, Royal Thai Government (DDC) scholarship
Focus: health system analytics, data governance, and information systems.
- Aug 2025 – Jun 2026 **M.S. in Digital & AI Technologies in Health Systems (DigiHealth)**, *Faculty of Medicine & Faculty of Engineering, Chulalongkorn University*, Bangkok, Thailand
Focus: digital health architecture, clinical AI applications, interoperability, and medical databases.
Independent study: *Development and Evaluation of an AI-Assisted Altitude Extraction System from Travel Itineraries for Travel Medicine* (advisor: Assoc. Prof. Watcharapong Piyaphanee, M.D.).
- Jun 2024 – Jul 2026 **Residency Training in Preventive Medicine (Travel Medicine)**, *Institute of Preventive Medicine, DDC, Ministry of Public Health*, Nonthaburi, Thailand
Focus: preventive medicine, travel risk assessment, vaccinology, and health security.
On planned academic leave from Aug 2026 to undertake the MSHCA at Carnegie Mellon; residency to resume on return.
- Apr 2013 – Jul 2019 **Doctor of Medicine (MD)**, *Faculty of Medicine Ramathibodi Hospital, Mahidol University*, Bangkok, Thailand
Clinical rotations across Internal Medicine, Surgery, Pediatrics, OB-GYN, and Emergency Medicine.
International clinical elective via the IFMSA SCOPE exchange — Hospital Clínico Universidad de Chile, Santiago (2017).
- 2010 – 2013 **Upper Secondary School (Science–Mathematics Program)**, *Triam Udom Suksa School*, Bangkok, Thailand

Work Experience

- Nov 2024 – Jul 2026 **General Practitioner — Preventive & Travel Medicine**, 🏢 *Office of Disease Prevention and Control 6 (ODPC 6), DDC, MOPH*, Pattaya, Chon Buri, Thailand
○ Deliver pre-travel risk assessment, yellow-fever vaccination/certification, and prophylaxis counselling; apply self-built clinical tools (e.g. altitude-risk analysis) at the point of care.
○ Serve as GP and site physician for the WHO Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP), contributing standardized surveillance data.
On academic leave from Aug 2026 for the MSHCA at Carnegie Mellon.
- Jun 2022 – May 2024 **General Practitioner**, 🏢 *Bamrasnaradura Infectious Diseases Institute*, Nonthaburi, Thailand
○ Led outpatient and Acute Respiratory Infection (ARI) clinic services through major COVID-19 and mpox outbreak responses (peak ~50 outpatients/day per physician).
○ Analyzed outpatient flow logs in Python to identify clinic bottlenecks, and presented the findings and scheduling recommendations to department leadership.
○ Delivered vaccinology counselling and designed clinical safety protocols for staff.

- Jul 2020 – **General Practitioner (Intern)**, 🏢 *Si Songkhram Hospital*, Nakhon Phanom, Thailand
- Apr 2022 ○ Managed general, emergency, and inpatient medical services at a community hospital.
- Sep 2019 – **General Practitioner (Intern)**, 🏢 *Nong Khai Hospital*, Nong Khai, Thailand
- Jul 2020 ○ Completed intern clinical rotations in emergency medicine, pediatrics, surgery, and OB-GYN.

Publications & Outbreak Investigations

- Peer-reviewed **Investigation of MMR Vaccine-Related Mumps Infections Cluster in Practical Nurse Students, Bangkok, Thailand** (2025). S. Lertsakulbunlue, D. Srithammavong, K. Tepsittha, H. Kanjanasombut, **V. Poonyakanok**, et al. *Journal of Tropical Medicine*. (co-author; field outbreak investigation)
- Surveillance evaluation **Evaluation of the Syphilis Surveillance System**, ODPC 6, Pattaya, Chon Buri, Thailand (Jan–Jun 2025). Assessed the national Digital Disease Surveillance (DDS) system’s attributes — sensitivity, predictive value positive, timeliness, and representativeness — and recommended improvements. (co-investigator; preventive-medicine residency study)
- Surveillance report **Preliminary Investigation and Rapid Response to a Methanol Intoxication Outbreak Linked to Illegal Herbal Liquor in Bangkok, August 2024**. C. Jitpeera, W. Rongdech, K. Raruenroeng, **V. Poonyakanok**, et al. *Weekly Epidemiological Surveillance Report (WESR)*, 2024. (co-author; rapid outbreak response)

Applied AI & Technical Training

- Apr – Jun 2026 **Super AI Engineer Season 6**, *Artificial Intelligence Association of Thailand (AIAT)*, Thailand, Advanced AI Level 2 — selected as one of the top 150 from 10,000+ applicants
 - **Coffee Chain Demand Forecasting Hackathon**: Private Kaggle Rank #1 / 2nd Runner-up overall (of 30 teams) — leakage-aware time-series pipeline with gradient boosting and robust cross-validation.
 - **Parasite Eggs Object Detection Challenge**: Ranked 16/166 — cascaded microscopy detector using SAHI, YOLOv8, and a DINOv2 classification head.
 - **Edge-AI Intelligent Transport System Hackathon**: Co-Honorable Mention — real-time CCTV edge analytics on Jetson Nano (YOLO/ONNX Runtime).
 - **WellSense AIoT Product Hackathon**: Academic Popular Vote — wearable running-posture monitor (Arduino Nano 33 BLE Sense, TinyML/Edge Impulse, BLE, React dashboard).
 - **Agentic Pipeline Hackathon (2026 Thai Election OCR)**: Ranked 102/571 — OCR pipeline for hand-written election reports.

Selected Projects

- Deployed tools
 - **DDS Chatbot (live demo)** — guardrailed Thai disease-surveillance LLM assistant for the Department of Disease Control (DDC): answers epidemiology questions via LLM tool-calling over an aggregate, PII-free data mart, with defense-in-depth, PDPA-aligned guardrails.
 - **Altitude Itinerary Analyzer (altit.app)** — full-stack clinical decision support web app that parses and analyzes multi-modal travel itineraries for high-altitude sickness risk assessment.
 - **Thai HospSearch (hoscode.vercel.app)** — interactive lookup mapped to the Thai healthcare administrative hierarchy (Region to Subdistrict) for administrative coding and records checking.
 - **Hajj Menstrual Delay Planner (hajj-period-planner.vercel.app)** — clinical utility for planning pharmaceutical menstrual suppression for female Hajj pilgrims.
- Data science
 - **Cirrhosis Survival Prediction (Kaggle)** — multi-class survival model using ensemble learning (XGBoost/LightGBM).
 - **Outpatient Waiting Time Analysis (Kaggle)** — ANOVA and Random Forest on hospital logs to pinpoint bottlenecks and forecast wait times.
 - **Sichuan-Yunnan Altitude & Transit Map (GitHub)** — QGIS geospatial visualization for Acute Mountain Sickness risk along the Sichuan-Yunnan highway.
- Dashboards
 - **Tableau: PM2.5 & Mental Health Dynamics** (with Interrupted Time Series), **Yellow Fever & Malaria Prevention**, and **Thai EPI Vaccine Dashboard**.

Certifications

Security &

Cloud

- TPQI × Huawei — AI Literacy Power Users & Cloud Developer Level 5 — 2026.
- ISC2 Certified in Cybersecurity (CC) — Apr 2026–Mar 2029.
- Huawei Cloud HCCDA — Tech Essentials & AI — Apr 2026–Apr 2029.
- Cybersecurity Foundation Course, Thailand National Cyber Academy — 2024.
- Google Cybersecurity Professional Certificate — 2024.

Data & AI

- Super AI Engineer — AI Practitioner Certification (Level 1), AIAT — 2026; includes Foundation AI (Theory), From Data to Insight, and the FahMai RAG & Agentic Pipeline hackathons.
- Google AI Essentials V1 — 2024.
- Certified Professional Data Analyst, DataRockie Bootcamp 9 — 2024.
- Google Advanced Data Analytics Professional Certificate — 2023.
- Data Visualization with Tableau Specialization, UC Davis — 2023.
- Excel Level Up Update 2021, SkillLane — 2023.
- Google Data Analytics Professional Certificate — 2023.

Medical &

Research

- CITI Program Biomedical Researchers — Jan 2025–Jan 2029.
- Introductory Course in Epidemiology & Biostatistics, DDC MOPH — 2024.
- ISTM Review Course, International Society of Travel Medicine — 2024.
- Diploma in Clinical Epidemiology, Chiang Mai University — Sep–Dec 2022.
- Diploma in Clinical Statistics, Chiang Mai University — Feb–May 2022.

Licensure & Registration

Medical License, Thai Medical Council — full registration since 2019.

Tour Leader License, Department of Tourism, Thailand — 2025.

Technical Skills

Programming & Statistics: Python, R, SQL, STATA

Machine Learning & Data Science: Scikit-Learn, gradient boosting & stacked ensembles (XGBoost, LightGBM, CatBoost), AutoGluon (AutoML), Chronos (time-series), PyTorch, YOLO, OpenCV, Pandas, NumPy, Jamovi

LLM & Generative AI: Claude, GPT, Gemini, GLM, Grok, and ThaiLLM APIs; RAG and agentic pipelines

Visualization & Geospatial: Tableau, Looker, Power BI, Matplotlib, Seaborn, QGIS, Adobe Photoshop, Inkscape

Software, Cloud & Hardware: Git, Firebase, Google Cloud Platform (GCP), Huawei Cloud, Arduino, TinyML, UML

Environments & HPC: Colab, Jupyter, Anaconda, Linux, LANTA HPC

Clinical Data & Interoperability: data interoperability, data governance, medical record systems

Languages & Interests

Languages

Thai (Native); English — Proficient (TOEFL iBT 91/120, Duolingo English Test 120/160).

Medical

Travel medicine, preventive vaccinology, emerging infectious diseases.

Technical

Public health informatics, clinical machine learning, geospatial disease mapping, healthcare cybersecurity.

Personal

Scuba diving (PADI Rescue Diver), photography, trekking, and travel.