Hanoi, Vietnam

Bang Nguyen

bangnbx@gmail.com

Experience

Founder & Engineer — **Real-Time Solana Analytics & Execution System** — **Apr 2025 – Present**

- Data ingestion: built fault-tolerant local state engine in Rust (Tokio async runtime, RocksDB, shared memory IPC), synchronizing tracked accounts via Yellowstone gRPC and RPC, utilizing multi providers for cross-validation and handling slot skipping
- Execution: processed real-time transactions via gRPC and shredstream for sub-millisecond signal detection, evaluated conditions against local state, and submitted trades programmatically
- On-Chain: used Anchor framework to build cross-verified local state against on-chain data; determined optimal trade size algorithmically based on pool liquidity and price modeling
- Analytics: decoded on-chain instructions and logs across DEX protocols (Meteora, Raydium, Pumpfun, Jupiter, ...) to identify and classify trade patterns

Engineer & Researcher — **FPT Technology Research Institute** — **Oct 2017 – Apr 2025**

- eKYC system: engineered ML verification pipeline and mobile SDK integration; deployed across banking and financial institutions — published at IEEE KSE 2022
- ML Model fine-tuning: fine-tuned small language models for text-to-SQL tasks using reinforcement learning techniques — published in NLP Journal 2025
- Credit Scoring: built end-to-end scoring system from data preprocessing through model evaluation to production deployment serving financial institutions
- Data infrastructure: designed multi-service backend architecture; automated large-scale data crawling pipelines (Python, Elasticsearch, MongoDB)
- Led team of developers and researchers across concurrent projects

Software Engineer — **Bayo Vietnam (startup in travel and tourism)** — **Feb 2016 – Aug 2017**

- Application: built backend architecture for travel booking, search, and social networking features
- Data ingestion: built near-realtime web crawler for aggregating travel review data across forums

Skills

- Programming languages: Rust, Python, Javascript, Shell
- Strong background in data structures & algorithms
- Blockchain: Solana, EVM (BSC/Arbitrum/Polygon) tools
- Back-end development: low-latency system, multi-service architecture, integrating machine learning models
- Database & Search Engine: RocksDB, SQL, Milvus (vector DB), MongoDB, Elasticsearch
- DevOps: Docker, Ansible
- Others: Crawling, Linux, Jupyter notebook
- Languages: Vietnamese (Native speaker), English (IELTS 7.5 - Apr 2025)

Projects

- **Credit Scoring** Assessed user creditworthiness based on social media profiles and behavioral patterns
- **Social Listening** Processed and analyzed data from millions of users in near real-time at scale
- **e-KYC Solution** end-to-end identity verification system — document OCR, facial recognition, video verification, and user identity validation

- **Bayo Platform** booking platform and travel-oriented social network
- **Freelance projects** Backend & mobile applications

Education

Hanoi — **VNU University of Engineering and Technology** — **2021 – 2023**

- Master in Computer Science. GPA: 3.56/4

Hanoi — **Hanoi University of Science and Technology** — **2012 – 2017**

- B.S. in Electrical Engineering and Telecommunications (Talented program). GPA: 3.24/4

Awards

- **VPBank Hackathon 2018** (VPBank) The most realistic project in the final round
- **Google Developer Group in Hanoi mini hackathon 2017** (GDG Hanoi) First prize
- **Code War (CTF, Competitive Programming, AI 2017)** (Framgia - Sun Asterisk) Second prize
- **Vietnam Informatics Olympiad 2012** (Ministry of Education and Training) Consolation prize

Publications

- Xuan-Bang Nguyen, Xuan-Hieu Phan, and Massimo Piccardi. "Fine-tuning text-to-SQL models with reinforcement-learning training objectives." *Natural Language Processing Journal* 10 (2025): 100135.
  `https://www.sciencedirect.com/science/article/pii/S2949719125000111`
- Viet-Trung Tran, Van-Sang Tran, Xuan-Bang Nguyen, and The-Trung Tran. "A liveness detection protocol based on deep visual-linguistic alignment." *In 2022 14th International Conference on Knowledge and Systems Engineering (KSE)*, pp. 1-6. IEEE, 2022
  `https://ieeexplore.ieee.org/document/9953623`