

Tu Phan

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OBJECTIVE

I learn new things. I find problems. I solve the problems. I simplify the solution for the public.

EDUCATION

Ho Chi Minh City University of Technology

September 2012 - April 2017

BE in Computer Engineering

Overall GPA: 7.75/10

BE Thesis: “Predicting Bitcoin Price by Machine Learning”

PUBLICATIONS AND APPEARANCES

- Duc-Phu Nguyen et al. “Deep Hybrid Models for Forecasting Stock Midprices from the High-Frequency Limit Order Book”. In: *Future Data and Security Engineering. Big Data, Security and Privacy, Smart City and Industry 4.0 Applications*. Ed. by Tran Khanh Dang, Josef Küng, and Tai M. Chung. Singapore: Springer Nature Singapore, 2022, pp. 393–406. ISBN: 978-981-19-8069-5
- Thang Nguyen-Dinh et al. “A Hierarchical Deterministic Wallet Using Ed25519 Digital Signature Scheme”. In: *Future Data and Security Engineering. Big Data, Security and Privacy, Smart City and Industry 4.0 Applications*. Ed. by Tran Khanh Dang, Josef Küng, and Tai M. Chung. Singapore: Springer Nature Singapore, 2022, pp. 240–257. ISBN: 978-981-19-8069-5

STUDYING COURSES AND BOOKS

- Andrew Ng and Kian Katanforoosh. *CS230 - Deep Learning*. 2019. URL: <https://cs230.stanford.edu/>
- Dan Boneh. *CS155 - Computer and Network Security*. 2019. URL: <https://cs155.stanford.edu>
- Sanjam Garg. *CS276 - Cryptography*. 2014. URL: <https://people.eecs.berkeley.edu/~sanjam/classes/cs276-fall14/>
- Andrew Ng. *CS229 - Machine Learning*. 2008. URL: <https://see.stanford.edu/Course/CS229>
- Ran Canetti and Ronald L. Rivest. *6.897 - Selected Topics In Cryptography*. 2004. URL: <http://courses.csail.mit.edu/6.897/spring04/materials.html>
- Lawrence C Washington. *Elliptic curves: number theory and cryptography*. CRC press, 2008

HONORS AND AWARDS

| | |
|------------------------------|--|
| The Grand Prize | Sui x KuCoin Labs Summer Hackathon, 2023. |
| The Second Prize | Dora Grant DAO Round 3, 2023. |
| Honor Grant | Superteam Vietnam Instagrant, 2023. |
| The Fifth Prize | Solana's Riptide Hackathon, 2022. |
| The Second Prize | Convergence - Serum & Wormhole Hackathon, 2021. |
| The Second Prize | Solana's Inaugural Hackathon, 2020. |
| The Second Prize | Tomochain Hackathon, 2019. |
| The First Runner-up | State of Chain Hackathon, 2018. |
| The Consolation Prize | Vietnamese Econometrics and Applications Olympiad for Undergraduate Students, 2017. |
| The Second Prize | Phu Yen Province Competition in Mathematics for High School Students of 12th Grade, 2012. |
| The Second Prize | Violympic - Phu Yen Province Internet Competition in Mathematics for Secondary School Students of 9th Grade, 2009. |
| The Consolation Prize | Phu Yen Province Competition in Mathematics for Secondary School Students of 9th Grade, 2009. |

PROFESSIONAL AFFILIATIONS

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|-----------------|---|
| Mentor | Build on Viction, 2023. |
| Panelist | GM Vietnam, 2023. |
| Speaker | BUIDL Vietnam, 2023. |
| Advisor | Solana Vietnam Coding Camp - Season II, 2022. |
| Advisor | Vietnam Web3 Coding Camp - Season I, 2022. |
| Mentor | KO (Kambria Online) Hackathon, 2021. |
| Mentor | Kambria Quiz/Code Challenge Series, 2020. |
| Mentor | #1 Vietnam Blockathon, 2017. |

EMPLOYMENT

DevRel Lead January 2024 - Present
Ninety Eight

- Lead the Web3 Indie Vietnam.
- Develop an MPC Federation.

CTO/Founder January 2023 - Present
Desig Protocol

- Desig is a blockchain-agnostic multisig solution.
- The protocol uses MPC and ZK to conduct a Threshold Signature Scheme in trustless environments.

CEO/Founder June 2021 - Present
Sentre Protocol — Descartes Network

- Sentre Protocol is **an incubation platform** for post-launch projects on Solana, which was **acquired by Ninety Eight** in 2023.
- **3 million USD fundraising** from top venture capitals, namely, Coin98 Finance, Fundamental Labs, Gate Labs, Kyros Ventures, Spark Digital Capital.
- The product line is varied from DeFi to PriFi including some significant brands such as **Project Kylan, Lightning Tunnel, Balansol, InterDAO**, and many others.

Senior Blockchain/AI/ML Developer February 2018 - June 2021
Kambria & Omhnilabs Vietnam

- Develop **UV Engine**, a web-based editor, to communicate with Ohmni robots for planning and task distribution via ROS.
- Research and develop a vision-based autonomous navigation, named **Xupr** agent. The agent only relies on RGB-based images to make decision in navigation.
- Build **Following Me**, a system that can track the owner and follow him/her.
- Build **FloorNet** based on UNet model to segment images to floor and non-floor.
- Propose **Proof-of-Burn** based on hierarchical deterministic keys. The technique was deployed onto several bridges for cross-chain services, mostly between Ethereum and Binance Chain.
- Develop blockchain applications (e.g. an on-page wallet, named **Kambria Wallet**), and secure financial services based on cryptography (e.g. a redeeming service, named **Distribution Portal**).
- Design a protocol, named **The Innovation Judge Protocol**, in game theory to decentralize the task of judgement.
- Conduct research for a privacy e-voting system based on homomorphic encryption, and mix networks.

R&D Specialist

October 2017 - February 2018

Bacoor Vietnam

- Carry out research on Ethereum's scalability.
- Apply decentralized exchange protocols such as **Lightning Network**, **0x**, **Relay Network**, **Polkadot** and others.

Fullstack Developer

May 2016 - October 2017

Infinity Blockchain Labs

- Integrate the OAuth protocol to **Know-Your-Customers (KYC)** systems.
- Build **AltaPolis**, an exchange service.
- Research applications of distributed pseudo-random number generator, proof of knowledge, zero-knowledge proof.

SKILLS¹

- **Programming Languages:** Javascript, Typescript, Solidity, Python, C/C++, Rust, Golang.
- **Frameworks & Libraries:**
 - **Web Application:**
 - * **Frontend.** NextJS, AngularJS, Remix Run, SolidJS, Ant Design, Material UI, Shaden, DaisyUI, TailwindCSS.
 - * **Backend.** NodeJS, NestJS, ExpressJS, HonoJS, Gin, Rocket.rs, Actix.
 - **Blockchain:**
 - * **Ethereum.** Geth, Truffle, Hardhat.
 - * **Solana.** SPL, Anchor.
 - **Distributed/Parallel System.** libp2p, Ray, IPFS.
 - **ML/AI.** Tensorflow, PyTorch, PyBullet.
 - **Robotics.** Arduino, ROS.
 - **Database:**
 - * **SQL.** PostgreSQL, MySQL.

¹For brevity, mainly remarkable items are enumerated. The actual list could be longer.

- * **NonSQL.** MongoDB, FaunaDB.
- * **ORM.** Mongoose, DrizzleORM, SeaORM.
- **Messaging.** ZeroMQ, RabbitMQ, Kafka, BullMQ.
- **DevOps:**
 - **Scrum Agile.** Jira, Notion, Trello.
 - **Version Control.** Git.
 - **Deployment.** GitHub, Docker, Terraform.
 - **Providers.** AWS, Render, Cloudflare, Google Cloud, Fly.io.
- **Linguistics:** Vietnamese (Native language), English (6.0 IELTS, taken in September 2019), Portuguese (Intermediate).

HOBBIES AND SOCIAL ACTIVITIES

My hobbies are football, work-out, and programming. I also dedicated myself to some charity activities such as:

- The Full-moon Night CSE in Tra Vinh province, September 2014.
- The Spring Volunteer Campaign in Ho Chi Minh City, July 2014.
- The Green Summer Volunteer Campaign in Tra Vinh province, January 2014.
- The Full-moon Night CSE in Tra Vinh province, September 2013.

REFERENCES²

Dr. Nguyen An Khuong

BE Thesis Reviewer, Academic Mentor

Faculty of Computer Science and Engineering,

Ho Chi Minh City University of Technology.

286 Ly Thuong Kiet Street, District 10, HCMC, Vietnam.

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Nguyen Duc Thai, Ph.D.

BE Thesis Advisor

Head of Department of Computer Systems and Networking,

Faculty of Computer Science and Engineering,

Ho Chi Minh City University of Technology.

286 Ly Thuong Kiet Street, District 10, HCMC, Vietnam.

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Dr. Thuc Vu

Former Employer

Co-Founder / CEO of Kambria & Ohmnilabs Vietnam

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²The list is sorted in alphabetical order.