

Tu Phan

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EDUCATION

Ho Chi Minh City University of Technology

BE in Computer Engineering

Thesis: *Predicting Bitcoin Price by Machine Learning*

September 2012 - April 2017

Overall GPA: 7.75/10

PUBLICATIONS AND APPEARANCES

- Jacob Creech, Brian Friel, and Tu Phan. *Solana Cookbook*. Solana Foundation, 2022. URL: <https://solanacookbook.com/vi>
- 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/~sanjamg/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 Instagrants, 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

Visiting Lecturer	Blockchain Enabled Business, RMIT, 2024.
Lecturer	Optimistic Rollup Bootcamp, 2024.
Speaker	Viction Horizons, 2024.
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

CTO/Founder January 2023 - April 2024
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 - January 2024
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 decisions on 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.
- Conduct applications on the distributed pseudo-random number generator, proof of knowledge, and 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, Shadcn, DaisyUI, TailwindCSS.
 - * **Backend.** NodeJS, Deno, NestJS, ExpressJS, HonoJS, Gin, Rocket.rs, Actix.
 - **Blockchain:**
 - * **Ethereum.** Geth, Truffle, Hardhat, Circom.
 - * **Solana.** SPL, Anchor.
 - **Distributed/Parallel System.** libp2p, Ray, IPFS.
 - **ML/AI.** Tensorflow, PyTorch, PyBullet.
 - **Robotics.** Arduino, ROS.
 - **Database:**
 - * **SQL.** PostgreSQL, MySQL.
 - * **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.

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

– **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 include football, working out, and programming. I am also dedicated to 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.