

Nguyen Dinh Dang Khoa

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I am a sophomore in Mathematics, majoring in Algebra. Passionate about abstract maths, theoretical computer science, and cryptography. I have some experiences in software development, though I'm planning doing research in the future.

Education

University of Science - VNUHCM

Sept 2020 – Present

Bachelor in Mathematics, majoring in Algebra.

Ho Chi Minh city - Vietnam

GPA: 8.3/10.

Experience

Seedcom

Oct 2021 – July 2022

Fullstack Developer of Coretech team

Ho Chi Minh city – Vietnam

- Developed and maintain an analytics system based on Superset – An open source project of Apache.
- Technologies: Python, React.js, PostgreSQL, MySQL.

Side Projects

Vanvo – A vietnamese-syntax programming language

July 2022

- An interpreter written in Go which can be broken down into 3 parts: Lexer, Parser and Evaluator. All of which are written from scratch.
- Support many unique features like allow spacing between identifiers, allow omitting multiplication sign between math expressions, list comprehension, lazy evaluation, set operations,...
- Beautifully underline programs's errors.
- Well-documented at balldk.github.io/posts/vanvo.
- Technologies: Go, WebAssembly.

balldk.github.io – Personal blog

July 2021

- A nice-looking personal blog built from scratch.
- Support markdown, latex, auto generate TOC, comment section,...
- Mostly write about my understandings in Math and Computer Science.
- Technologies: Go, Nuxt.js, MySQL.

Tutorbot – Online matching tutor app

March 2020

- A Facebook Messenger Chatbot that connects students and tutors from different places together based on their age and learning purposes.
- Attracted hundreds of users within first-month operation.
- Technologies: Node.js, MongoDB, Messenger Platform.

Bitexam – Exam storage system

November 2018

- A system built on top of Ethereum smart contract, aiming at large-scale exams which need high reliability.
- Able to store examinees' tests securely, prevent some alternation factors.
- Technologies: Solidity, Web3.js, Electron.js, Vue.js.

Skills

Programming:

- **Familiar with:** Go, Python, Node.js, Vue.js, MySQL, Git, Blockchain, Matlab, Latex.
- **Know/Used:** Docker, React.js, Julia, MongoDB, PostgreSQL.
- **Hobby/Interested in:** Rust, Haskell.

Mathematics:

- Undergraduate level of mathematical thinking.
- Have a concrete understanding of some fundamental subjects such as Linear Algebra, Calculus, Analysis, Discrete Math.
- Familiar with abstract spaces such as metric space, Hilbert space, topological space,...
- Familiar with group, ring, field through Modern Algebra, Field and Galois Theory courses.
- Able to use some math tools: Matlab, Mathematica, Julia, Coq.

Language:

- **Vietnamese:** Mother tongue.
- **English:** Fluent.
- **French:** Hobby.

Achievements

- Ranked Third in Informatics at "HCMC Excellent Student Competition". **2019 – 2020**
- Bronze Medal in Informatics at "HCMC April Olympic Competition". **2018 – 2019**
- Gold Medal in Informatics at "HCMC April Olympic Competition". **2017 – 2018**