

TUAN TRAN

SOFTWARE ENGINEER

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Work Experience

SEA GROUP, SOFTWARE ENGINEER - BACKEND

Ho Chi Minh, Dec. 2018 - Mar. 2021

- Worked in back-end team of Now, one of the largest food delivery platforms in Vietnam with **1 million** daily users.
- Developed customer relationship management (CRM) project for business development team using **Python** and **Django**.
- Speeded up report queries by applying **denormalization model** using **ElasticSearch**, saving **90%** query time and reducing **5%** bandwidth usage of the **MySQL** database.
- Improved data synchronization workflow by applying message queue using **Kafka**.
- Promoted to **senior software engineer** after 2020.

BIOTURING, RESEARCHER AND DEVELOPER

Ho Chi Minh, Jun. 2017 - Nov. 2018

- Worked in the bioinformatics field using computer science and biological knowledge.
- Became tech lead of a research team working on command-line tools for processing DNA and RNA data using **C**.
- Developed Bioturing Browser, an application for analyzing and visualization of RNA and single-cell sequencing data using **Javascript**, **Nodejs**, and **Electron**.

BIO-O CODING, TEACHING ASSISTANT

Ho Chi Minh, Jan. 2017 - May. 2017

- **Prepared** and **taught online** data structures and algorithms for Vietnamese and international students from beginner to advanced level.

Projects

CALLING VARIANT

2018

- Developed a command-line tool for calling variant from DNA-sequencing data using **C**.
- Used **Burrow-Wheeler Aligner** for short-read alignment and **Bayesian model** for detecting mutations.
- This tool was **three times faster** than GATK (the state-of-the-art tool of this field at that time).

MDUP

2018

- Developed a command-line tool for preprocessing linked-reads DNA-sequencing data.
- Used **hash algorithm**, **dynamic allocation memory**, and **multi-threading** to optimize storage and facilitate speed. This tool reduced the waiting time by **80%** compared to other applications.

Education

Ho Chi Minh City University Of Science

Ho Chi Minh, Vietnam

B.S. IN COMPUTER SCIENCE, HONORS PROGRAM

Sep. 2014 - Sep. 2018

- Got a scholarship for the best students in 2017.

Honors & Awards

- **First Prize** in the Company (SEA Group) Hackathon. 2019
- **Rank 252/21038** in Snack Down (Codechef contest). 2017
- **Honor Prize** in Samsung Collegiate Programming Cup. 2017
- **Most Valuable Player** in CodeWar (capture the flag hacking competition) 2017
- **Rank 30** in ACM – ICPC Asia Regional Contest 2017
- **Second Prize** in ACM – ICPC Vietnam National Contest 2017
- **Second Prize** in the Vietnam Olympiad of Informatics for High-school Student Individual Contest 2014
- **Candidate Master - Top 4000/94575** in Codeforces. **Top 500/182781** in HackerRank.

Skills

- **Programming languages:** **C/C++** (5 years), **Python** (3 years), **Javascript** (1 year).
- **Technologies:** Framework (**Django**, **Nodejs**), Database (**MySQL**, **ElasticSearch**), Cache (**Redis**), Message queue (**Kafka**).
- **Others:** **Git**, **Bash**, **Linux**.