TRONG GIA HUNG NGUYEN *(Jim)*

Chicago, IL | (312) – 818 8808

tnguy321@uic.edu | giahung.nguyentrong@gmail.com | linkedin.com/in/tronggiahungnguyen/

EDUCATION

2021– Present: **University of Illinois, Chicago.** Major in Computer Science.

- Major GPA: ***4.0 / 4.0*** *and h*onorably being named in the **College of Engineering Dean's List** for outstanding academic achievement.

2018 – 2021: **Gia Dinh Gifted High School**, Ho Chi Minh City, Vietnam

- *Gold Medal in Municipal Competitive Programming, Ho Chi Minh City, Vietnam - March 2021.*
- *Bronze Medal in Municipal Competitive Programming, Ho Chi Minh City, Vietnam - March 2020.*
- *Bronze Medal* in Competitive Programming Summer Camp at Ba Ria City, Vietnam - July 2019.
- *Top 5 best students of the Computer Sciences Faculty* upon graduation at Gia Dinh Gifted School in July 2021.

SKILLS

- Coding languages: C, C++, Python, SQL, R, F#, Go, Prolog
- Main courses taken: Machine Learning, Languages and Automata, Machine Organization, Data Structures, Programming Practicum, Applied Statistical Methods, Intro to Advanced Math

RESEARCH EXPERIENCE

"The Quest For Prime Numbers" (2024): - *GitHub*

- Contributing to ongoing research endeavors focused on discovering larger prime numbers.
- Utilizing primarily the AKS Primality Test and Miller-Rabin Test methodologies, successfully identified a prime number with 417 digits.
- Our AKS Primality Test python implementation successfully identified a prime number with 500 digits in 8.6 hours.

WORKING EXPERIENCE

- *January 2024 - Present: Teaching Assistant, CS251 (Data Structures) at University of Illinois Chicago*
  Lead lab sessions and provide personalized guidance to students, resulting in improved comprehension and performance. Collaborate with instructors to enhance lecture content and facilitate a supportive learning environment and receive positive feedback from both students and faculty.
- *August 2023 - Present: Grader for MATH210 (Calculus 3) at University of Illinois Chicago*
  Provide thorough and accurate grading of homework assignments, ensuring students receive valuable feedback. Contribute to maintaining high academic standards by evaluating student performance with precision and fairness.
- *January 2023 – May 2023: Computer Specialist IV at University of Illinois Chicago*
  Main responsibilities: Managing lab equipment as well as organizing events.

PROJECT ACHIEVEMENTS

zZz Sleep Tracker - SparkHacks Hackathon (JavaScript, CSS, HTML):

- Collaboratively implemented a basic functionality of a sleep wellness application using JavaScript, CSS, and HTML. The concept garnered 2nd place recognition at SparkHacks (won over 14 teams out of 16 teams), demonstrating its potential to support individuals' sleep health.

Spotify Hit Songs Prediction (Python):

- The project focused on classifying hit songs based on their unique characteristics using a variety of machine learning models. Explored K-nearest neighbors, Support Vector Machine, Decision Tree, Neural Networks, and Logistic Regression algorithms to determine optimal approaches for this task.
- Achieved outstanding results with the Support Vector Machine model, boasting a remarkable accuracy of 93.25%.
- K-nearest neighbors demonstrated the effectiveness of simpler implementation methods, which yielded comparable accuracy levels.

Parser and type checker for Simple C language (F#):

- Utilized F#'s higher-order functions to develop a syntax checker based on Backus-Naur Form (BNF).
- Implemented functionality to detect invalid syntax, and tracked variable types and usages.
- Generated detailed error messages with specific error locations to facilitate quick fixes.

Shortest Path Application (C++):

- This application determines the shortest route to navigate between UIC's buildings using real-life data.
- Algorithm: The Dijkstra algorithm is chosen for route optimization.
- Successfully modified the Dijkstra algorithm implementation to print the shortest path.

Outlast the Baddies & Avoid the Abyss (C): Utilizing memory allocation and functional programming, this game has been developed, where each object in the game possesses unique functionality. The objective of the game is to safely move the hero to the escape ladder.

EXTRACURRICULAR ACTIVITIES

- Active participant in Conference 2019: *WORLD CITIZEN*, Vietnam 3D Project – 2019
- *Grade 5 Piano*, The Associated Board of the Royal Schools of Music (ABRSM) – 2019
- *Volleyball men's Binh Thanh District Championship*: *Bronze – Silver – Bronze* (2018, 2019, 2020 respectively)