TRAN HUYNH

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Education

Arizona State University at Tempe   Expected May 2023

Master of Science in Robotics Autonomous System (Artificial Intelligence)

California State University Sacramento   Jan 2018 - Dec 2020

Bachelor of Science in Computer Science   Dean's Honor Roll
  - **GPA:** 3.911 / 4.0
  - Minor in Mathematics

Skills

Programming: C, C++, Python, SQL, Racket, Java, HTML, CSS, Bootstrap, React
Technologies: Jupyter Notebook, MySQL, Bash, Microsoft Office Suite, Linux/Unix, Window
Language: Bilingual Vietnamese / English

Project Experience

Sec Tutor   Oct 2019 – Dec 2020
  - Design, build, and assess online learning tool for secure programming. This tool will help user learn, practice secure programming from each other and from experts.
  - Develop questions bank base on the misconceptions and different computer system security topics.
  - Construct intelligence tutorial system to provide tests based on user's current understanding level.

Jsteg – Simple Image Steganography for Data Hiding   Dec 2020
  - A small program that conceal secret messages into multiple files in the digital camera SD card. Secret data will be encrypted using block cipher in GCM, then they will be split and hidden in different image files in SD card.
  - The program and encrypt/decrypt process is implemented using C.

Performance Analysis of Lightweight Ciphers on IoT Devices   Jan 2020 – Dec 2020
  - Analyze the hardware and software efficiency of lightweight symmetric ciphers (Presents, Clefia, Grain, Mickey, and Chacha20) on Raspberry Pi 4.
  - Utilize the OpenSSL library (version 1.1.1) to run different modes of operation of AES and 3DES ciphers with Bash script. Other ciphers are implemented in C programming language.

Optimizing the Magic Square Problem Using Genetic Algorithms with DEAP   Nov 2020
  - Apply Genetic Algorithm and DEAP library to return an N*N size magic square giving an N*N random array of unique number from 1 to N*N.
  - Correctly detect the 3x3 magic square after 5th generation, 4x4 magic square after 24th generation.
  - The project is implemented using Python and DEAP library in Jupyter Notebook.

Publication and Presentation

  - Jericho Rivero, **Tran Ngoc Bao Huynh**, Angelica Smith-Evans, Ong Thao, and Yuan Cheng, Analyzing the Efficiency of Lightweight Symmetric Ciphers on IoT Devices, Computer Science Conference for CSU Undergraduates, 2021. (Accepted)

Working Experience

Research Assistant   **Computer Science Department, Sacramento State**   Oct 2019 – Dec 2020
- Research and analyze the misconceptions that students have when they are programming.
- Generate questions to provide information and raise awareness for students of secure programming.
- Implement and design front end website for the project.

Teacher Assistant   **Computer Science Department, Sacramento State**   Feb 2019 – May 2020
- Assist classes of total 100 students in grading student assignments.
- Provide solutions and explanations for error in their code and assignments. Provide feedback for improvement.
- Prepare overall progress reports on students' assignments regularly to update their performance with professor.

Activities and Accomplishments

- ICPC Pacific Northwest Region (**Participation**)   March 2021, Nov 2019
- Cyber Fast Track (**Semi-Finalist, top 540 over 13,280**)   Jul 2019
- ICPC Programming contest at Sac State (**Third Place**)   March 2019
- Sacramento State Hornet Hacks (**Excellence Human Energy Award
  By Chevron (Voice To Image (VTI) – Team Project))**   Oct 2018
- ACM Programming contest at Arkansas State University (**Second Place**)   Nov 2017

Leadership

President of Badminton Club   **California State University Sacramento**   Aug 2019 – Dec 2020
- Set up courts and meeting weekly. Ensure safety for participants.
- Assist club officers during organization events.
- Create club T-shirts and motivate team members.
- Maintain regular communication with members, advisors, and other school associations.

Treasurer of Badminton Club   **California State University Sacramento**   Aug 2018 – Jul 2019
- Manage Club budget and ordering Club's equipment (Rackets, Birdies, Strings, and Nets)
- Promote organization on campus.
- Coordinate events and tournaments.

Community Services and Honors

- Vietnamese Interpreter and volunteer at South Sacramento pop-up Pannell Covid-19
  Vaccine   April 2021
- Volunteer at Coalition of Concerned Medical Professionals Sacramento   Sep 2019 – Dec 2019
- Volunteer at World Language Day – Vietnamese Country Table Coordinator
  At Sacramento State, CA   Nov 2019
- Volunteer at Harvest Sac State, Sacramento CA   Feb 2018
- Ghost writer (note taking) for students with disabilities at Arkansas State University   Aug 2017 – Dec 2017
- Volunteer at Arkansas Science Festival and Blood Drive   2017