Tran Huynh

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Education

- **Arizona State University** — Tempe, AZ
  Master of Science (MS) in Robotics and Autonomous System - AI; GPA: 3.89/4.0 — *Aug. 2021 - May. 2023*

- **California State University, Sacramento** — Sacramento, CA
  Bachelor of Science in Computer Science; GPA: 3.91/4.0 — *Jan. 2018 - Dec. 2020*
  Minor in Mathematics

Relevant Coursework

- Artificial Intelligence
- Clinical Neuroscience
- Integ Robot Learning w HumanRobot Collaboration (Ongoing)
- Algorithms in Computational Biology (Ongoing)
- Advance in Robot Learning
- Modeling and Control of Robots
- Multi-Robot System (Ongoing)

Technical Skills

- **Programming Languages**: C, C++, Python, Racket, Java, HTML, CSS, Bootstrap, React
- **Design and Simulation Tools**: Matlab, ROS, NetLogo, Webots
- **Operating Systems (OS) Used**: Ubuntu, Windows
- **Development Platform**: GitHub, GitLab

Experience

- **Neurorobotics Lab - Arizona State University** — Tempe, AZ
  Volunteer Research Assistant — *May 2022 - Present*
  - Captured and analyzed human's angle of Foot, Ankle, Shank, Knee, and Hip during Gait Cycle using Vicon Motion Capture.
  - Processed the data using Matlab to get Phase Angles and Phase Plot of human normal walking gait.
  - Trained machine learning models to predict the gait cycle from the angles and data gathered.

- **Secure, Trusted, and Assured Microelectronics (STAM) Center - ASU** — Tempe, AZ
  Graduate Service Assistant - ASCS and SECPS Lab — *Aug. 2021 - May 2022*
  - **ASCS - Adaptive and Secure Computing System** Reviewed papers and researched on Zero-knowledge proofs, Homomorphic Encryption, and its application for data integrity in cloud and distributed systems.
  - **SECPS - Secure Resilient Cyber-Physical Systems) Laboratory** Researched on designing Hardware in the Loop cyber-physical system for Prosthetic Limbs and Assitive Devices.

- **California State University, Sacramento** — Sacramento, CA
  Research Assistant — *Oct. 2019 - Dec. 2020*
  - Researched and analyzed the misconceptions that students have when they are programming.
  - Generated questions to provide information and raised awareness for students on the topic of secure programming.
  - Implemented and designed a front end website for the project.

- **California State University, Sacramento** — Sacramento, CA
  Teacher Assistant — *Feb. 2019 - May. 2020*
  - Assisted classes of 100 students in grading assignments.
  - Provided solutions and explanations for error in students' code and assignments and feed back for improvement.
  - Prepared overall progress reports on students' assignments regularly to update their performance with their professor.

Projects

- **UAV Swarm Searchig Using Evolution Algorithm, Flocking, and Stigmergy** *Feb. 2022 - Apr. 2022*
  - Simulated flocking and stigmergy behaviors for swarm UAV using NetLogo.
  - Used evolutionary algorithms to achieve optimal parameters, to improve performance of the UAV swarm in different environments.
- **Playing Pacman with Reinforcement Learning** *Sept. 2021 - Nov. 2021*
  - Implemented informed state-space search to guide Pacman through a maze efficiently. Search algorithm includes: Bredth First Search, Dept First Search, Uniform Cost Search, and A* Search.
  - Implemented minimax and expectimax to design multi-agent environments (ghosts and pacmans), and solved the adversarial, stochastic search problem.
  - Implemented reinforcement learning Pacman. The project was implemented using Python.
- **Optimizing the Magic Square Problem Using Genetic Algorithms with DEAP** *Nov 2020*
  - Applied Genetic Algorithm and DEAP library to return a N*N size magic square giving an N*N random array of unique number from 1 to N*N.
  - Correctly detected the 3x3 magic square after 5th generation, 4x4 after 24th generation.
  - The project is implemented in Python
- **Sec Tutor** *Oct 2019 - Dec 2020*
  - Designed, built, and assessed online learning tool for secure programming. This tool will help users learn and practice secure programming from each other and from experts.
  - Developed a question bank base on the misconceptions and different computer system security topics.
  - Constructed an intelligent tutorial system to provide tests based on a user's current understanding level.

Publication and Presentation

- Ida Ngambeki, Matt Bishop, Jun Dai, Phillip Nico, Shiven Mian, Ong Thao, **Tran Ngoc Bao Huynh**, Zed Chance, Isslam Alhasan and Motunrola Afolabi, "SecTutor: An Intelligent Tutoring System For Secure Programming", 15th World Conference on Information Security Education, 2022.
- Jericho Rivero, **Tran Ngoc Bao Huynh**, Angela Smith-Evans, Ong Thao, and Yuan Cheng, "Analyzing the Efficiency of Lightweigth Symmetric Ciphers on IoT Devices", Computer Science Conference for CSU Undergraduate, 2021.

Leadership Experience

- **Sun Devil Birdies - Arizona State University** Tempe, AZ
  Vice President *Aug. 2022 - Aug. 2023*
  - Coordinated events and tournaments.
  - Assisted club officers during organization events and weekly meeting.
  - Promoted organization on campus
- **Badminton Club at Sac State - California State University, Sacramento** Sacramento, CA
  President and Treasurer *Aug. 2018 - Dec. 2020*
  - Set up courts and weekly meetings. Ensured safety for participants.
  - Maintained regular communication with members, advisors, and other school associations.
  - Manage Club's budget and Club's equipment.

Activities and Accomplishments

- ICPC Pacific Northwest Region **(Participation)** *March 2021, Nov 2019*
- Cyber Fast Track **(Semi-Finalist, top 540 over 13,280)** *Jul 2019*
- CSUS Programming Contest **(Third Place)** *March 2019*
- Sacramento State Hornet Hacks **(Exccellence Human Energy Award by Chevron)** *Oct 2018*
- ACM Programming Contest at Arkansas State University **(Second Place)** *Nov 2017*