Rawisara Chairat

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EDUCATION

Cornell Tech, Cornell University New York, NY
M.Eng. in Electrical and Computer Engineering May 2027
Relevant Coursework: Applied Machine Learning, Computer Systems and Architecture, Virtual and Augmented Reality

Boston University Boston, MA
B.S. in Computer Engineering, *magna cum laude*, GPA: 3.95 May 2026
Concentration: Machine Learning

TECHNICAL SKILLS

Programming: C++, Python, SQL, Verilog, C, MATLAB, Shell, JavaScript, C#, Assembly
Machine Learning: PyTorch, OpenAI API, scikit-learn
Game Development: Blender, Unreal Engine, Unity
Cloud: Kubernetes, OpenShift, Docker, AWS
Embedded Systems & Hardware: ESP32, Arduino, Haptic Systems, IMU, FPGA, Raspberry Pi

PROFESSIONAL EXPERIENCE

REPCO NEX Industrial Solutions, Predictive Analytics Solution Intern, Rayong, Thailand June 2025 - July 2025

- Developed a predictive machine learning model using Python to estimate chemical concentrations in a caustic tower in order to reduce manual concentration sampling and improve process monitoring efficiency.

Boston University Electrical and Computer Engineering, Undergraduate Researcher, Boston, MA June 2024 - Aug 2024

- Modeled Compute-in-Memory (CIM) accelerators for Deep Neural Network inference using CiMLoop, evaluating energy, latency, and chip area, and used the Architectural Carbon Modeling Tool to estimate operational and embodied carbon.
- Analyzed tradeoffs among SRAM-based CIM, RRAM-based CIM, and Systolic Array architectures, finding CIM reduced energy and operational carbon through less data movement, while requiring greater area and embodied carbon.

PROJECTS

The Pickle, Inc. (Unreal Engine, Blender, C++) Fall 2025 - Spring 2026
Award-winning pickleball video game integrating custom motion-tracking and haptic-feedback hardware.

- Built and launched Picklemania on Steam, a game that can be played as a standalone experience or enhanced through a custom smart pickleball paddle featuring motion tracking and haptic feedback.
- 4x Award Winner: Entrepreneurial Award (BU College of Engineering), Overall Winner (ECE Shark Tank), Design Excellence Award (Top 4 of 30 Senior Design Projects), and Best Promotional Video Award.

To the Cloud: Neuroscience Pipelines on Tekton (Python, Shell, Tekton) Fall 2025
Cloud-native neuroimaging platform designed to make neuroscience research tools more accessible to clinical users.

- Developed an automated Tekton pipeline on OpenShift that streamlined neuroimaging tools into an end-to-end workflow for processing medical imaging data in containers.

MotionBed (C++, Arduino) Spring 2024
Miniature model of a gesture-controlled hospital bed.

- Implemented gesture recognition algorithms and optimized microcontroller code to translate user commands into bed movements, allowing control of bed height, headrest and leg rest through an Elegoo Uno R3.

Whack-A-Mole Game (Verilog, FPGA) Fall 2023
Interactive FPGA-based game featuring real-time mouse input and VGA graphics.

- Designed and implemented Verilog modules for game logic, mouse input, and VGA rendering, integrating multiple hardware components into a functional FPGA system.

EXTRACURRICULARS

Boston University, Machine Learning Grader, Boston, MA Sept 2025 - Dec 2025

- Evaluated assignments for 60+ students per week, providing constructive feedback to enhance student understanding.
- Held weekly office hours to support students with coursework, debugging, and conceptual problem-solving.

Boston University Thai Students Association, Co-President, Boston, MA Apr 2024 - Apr 2025

- Led and managed organization of 100+ students, providing a supportive and inclusive environment for Thai students.
- Provided guidance to executive board and members, fostering leadership development, collaboration, and mission continuity.