

Bank Leelathanapipat

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EDUCATION

University of Waterloo

Bachelor of Applied Science in Computer Engineering

Waterloo, ON

Sep. 2025 – May 2030 (Expected)

- Focus on hardware, embedded systems, and software development.
- Completed coursework in programming, circuits, digital systems, and linear algebra.

TECHNICAL SKILLS

Programming Languages: C++, C, Python, JavaScript, Verilog, SQL, HTML/CSS

Frameworks: React, Node.js, Tailwind CSS, Google Apps Script

Libraries & Databases: Pandas, NumPy, Matplotlib, Firebase, MongoDB

Developer Tools: Git, GitHub, VS Code, COMSOL, Vercel, API Development, IoT (Arduino/ESP32)

WORK EXPERIENCE

Research Assistant

Jul. 2024 – May 2025

IEEE, King Mongkut's Institute of Technology Ladkrabang

Bangkok, Thailand

- Engineered a low-budget IoT water level measurement system using ESP32 to facilitate flood mitigation and dam failure prevention in collaboration with university faculty.
- Presented technical findings at the 2024 Asian Conference on Communication and Networks; results are officially published and indexed in the IEEE Xplore Digital Library.

Software Engineering Intern

Jul. 2024 – Aug. 2024

ODDS-Thailand

Bangkok, Thailand

- Developed responsive UI components using React and Tailwind CSS for a \$300M financial services platform, ensuring cross-browser compatibility and 99% uptime.
- Optimized database queries for a MongoDB cluster containing 20M+ entries, significantly improving data retrieval speeds for financial reporting.

Lead Developer (NurseMetrics)

May 2023 – Aug. 2024

King Chulalongkorn Memorial Hospital

Bangkok, Thailand

- Architected a KPI tracking web application using Google Apps Script (JavaScript) to automate data entry, reducing reporting time for 100+ medical staff by 70%.
- Collaborated with the hospital's technology department to ensure seamless system integration and trained 100+ nurses on effective platform utilization.

PROJECTS & LEADERSHIP

Badminton Tracker (Full-Stack Web App)

Dec. 2025 – Present

Personal Project

Bangkok, Thailand

- Building a real-time score-tracking app using React and Node.js to help players keep track of match progress during live games.
- Developed an API to store and sync match history and player stats in a MongoDB cloud database.
- Deployed the application on Vercel with a responsive UI built in Tailwind CSS for easy use on mobile and desktop.

Engineering Lead & Fundraising Officer

Aug. 2023 – May 2025

Go Baby Go

Bangkok, Thailand

- Engineered custom electrical interfaces and control systems for battery-powered toy cars, enabling joystick-based mobility for children with physical disabilities.
- Managed a fundraising campaign that raised \$1,400 to procure modification kits, facilitating the donation of specialized vehicles to Siriraj Hospital.

Founder & Workshop Leader

Jun. 2021 – May 2025

PuzzlePeace

Bangkok, Thailand

- Designed and conducted Rubik's cube workshops for 50+ hospitalized children and individuals with special needs to improve cognitive development and motor skills.
- Launched a YouTube channel to deliver digital tutorials on algorithmic solving techniques, reaching a global audience.