Pakon Pongpeauk

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Education

George Mason University — Fairfax, VA
B.S. Computer Science — *Expected May 2027*

Experience

Johns Hopkins University Applied Physics Laboratory — June 2021 – April 2022
Software Developer Intern — *Laurel, MD (Remote)*

- Researched and developed artificial intelligence systems leveraging historical weather and satellite imagery data to predict disease outbreaks in third-world countries ahead of time.
- Actively collaborated with a dynamic team of three to parse large datasets and train a deep neural network using the TensorFlow library.

Unitrade — April 2023 – Present
Self-Employed — *Remote*

- Spearheaded development of a comprehensive full-stack e-commerce application using React Native, PostgreSQL, and Redis to facilitate buying and selling within college campuses.
- Implemented unit tests, feature flags, and analytics to optimize user experience and conversion rates.

Projects

XCS - Building Access Control Dashboard — August 2021 – Present

- Developed a dockerized full-stack application using React, PostgreSQL, and Redis to enable discretionary access control configuration for card readers within the Roblox game platform.
- Designed and implemented a RESTful API, handling over 25 distinct endpoints, 25+ data models, and 50,000+ requests per day.
- Set up and managed efficient CI/CD pipelines with GitLab, hosted on a home-lab.
- Achieved approximately 100 MAUs from closed beta rollout.

Murality - HooHacks 2024 — March 2024

- Collaborated with a team of four to develop a website using React, MongoDB, and Spring that provides users an infinite 2D canvas to create and organize photo memories.
- Implemented a large language model to automatically categorize uploaded photos into labeled albums.
- Top 10, and 2nd place for Best Art and Gaming project at HooHacks, a hackathon at the University of Virginia.

Emotion Encoder — February 2024 – Present

- Developed a Python application using Google MediaPipe, PyGui, and TensorFlow to create a simulated LED matrix visualizer mapped onto 3D-printed masks.
- Trained a convolutional neural network (CNN) model to predict a person's emotions from video input and map them to LED outputs.

Activities

GMU Computer Science Club — August 2023 – Present
Officer, Software Developer

- Spearheaded the development of a check-in web application within a one-week timeframe for HackFax, the club's flagship coding hackathon, enhancing efficiency and participant experience.
- Independently designed, developed, and deployed the application with Amazon Web Services.
- Achieved a milestone of approximately 300 active users during the event's three-day duration.

GMU Association for Computing Machinery (ACM) — January 2023 – Present
Member

- Collaborated with peers to tackle competitive programming challenges and dynamic projects, fostering teamwork and problem-solving.

Skills

Languages: Python, Java, C++, C, JavaScript, Lua, SQL
Libraries: Redis, PostgreSQL, MongoDB, Node.js, React, React Native, Spring, Django, TensorFlow
Tools: Linux, Git/GitHub, CI/CD, Docker, Amazon Web Services, Google Cloud Platform, Figma