PATT PHURTIVILAI

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THE UNIVERSITY OF HONG KONG (HKU) - FULL SCHOLAR
Bachelor of Engineering Majoring in Computer Science Minor in Statistics **Sep2022 - Expected: May 2026**

EXPERIENCE

FOUNDER AND CEO OF AZAI   **Feb 2022 - Present**
FINTECH START UP WINNING TEAM, 100K HKD GRANT FROM CYBERPORT
- Azai: An application that can facilitate landlords in Thailand to easily create contracts, conduct payments, and manage their properties.
- Develop Android Application and Website, applying payment API

RISKSIS TECHNOLOGY LMITED - FULL TIME SUMMER INTERNSHIP   **June 2023 - Aug 2023**
SOFTWARE ENGINEERING & DATA ANALYST INTERNSHIP
- Data Retrieving, Data Preprocessing, Model training by Keras, OpenCV, Sci-Kit Learn etc.
- Buiding Web-App for a company using frontend frameworks, develop interface for 3d visualization using Unity
- Writing scripts in C#, python to fulfilled work requirements.

RISKSIS TECHNOLOGY LMITED - PART TIME   **Sep 2023 - Oct 2023**
SOFTWARE ENGINEERING & DATA ANALYST PART TIME

RESEARCH

FULL-TIME AI RESEARCH ASSISTANT   **May 2024 - Aug 2024**
INNO WING, INNOVATION ACADEMY, HKU
- Conducted individual research in computer graphics, 3D reconstruction, Gaussian Splatting for real-time rendering with Lidar, Depth Sensor, SLAM
- Researched on LLM with GPT 4o, OCR and Layout detection model to develop a Multimodal Retrieval-Augmented Generation system
- Research project sharing and collaborate with **UBC** and **Tsinghua University**
- Hosted workshops on computer graphics, computer vision, RAG

CO-AUTHOR: FOSTERING AI MAKERSPACE, A Journey through Introductory Hands-On Workshop   **May 2024**
8TH INTERNATIONAL SYMPOSIUM ON ACADEMIC MAKERSPACE
- A paper accepted to ISAM2024

PART-TIME AI RESEARCH ASSISTANT   **Aug 2023 - Present**
INNO WING, INNOVATION ACADEMY, HKU
- Led a computer vision and graphic research team, exploring cutting edged technology
- Hosted workshops for participants from Hong Kong University
- Conducted research in large language models, RAG, and developed a local chatbot

PROJECTS

LIDAR SLAM 3D RECONSTRUCTION FOR LARGE SCALE DATA   **May 2024 - Aug 2024**
3D Gaussian Splatting with Lidar and SLAM system
- Created a 3D reconstruction model that generates high-detail views using LiDAR and SLAM, reducing training time.
- Segmented large scenes into sub-chunks for independent training with binary masks, improving model performance.

AI Historian Assistant   **May 2024 - Aug 2024**
Multimodal RAG System to support Historians
- Developed a multimodal RAG chatbot that retrieves both image and text data, enhancing educational resources for historians.
- Utilized LayoutLMV3 and GPT-4o for image database processing, implementing local embedding and search techniques for effective data retrieval.

FARM GPT - TEAM LEADER, REPRESENTED HKU   **Feb 2024 - Apr 2024**
HKAES UNIVERSITY PITCH COMPETITION 2023/2024
- Represented Hong Kong University in a competition to develop AI-powered solutions for global climate change challenges.
- Led the team in creating FarmGPT, a federated learning model with a data hub and chatbot assistant for farmers.

HELLO MEMORY - VR PROJECT   **Dec 2023 - Feb 2024**
MERIT AWARD HKTECHATHON 2024 ORGANIZE BY HKSTP
- Team Leader, working on a AI computer graphics project using NeRF AI and Luma API, together with the app prototype development for dementia patient.

SIDE PROJECTS, GITHUB: **PATTGENE**
- Data Analytic, Model Training, Computer Vision, Computer Graphics, LLM, WebApp Development, etc.
- I have completed several projects, including a temperature prediction model, linear regression model, character recognition model with MLP, etc.

HONORS & AWARDS

- First Runner up GENAI Hackathon 2024
- Merit Award HKTechathon 2024
- Winning HK$ 100k grant from CCMF Cyberport in Fintech Competition. Currently working on my own start up, AZAI, a leasing fintech application.
- Tang Pak Kau Scholarships
- HKU Undergraduate Entrance Scholarship (Full Tuition) | for Outstanding Academic Talented
- Gold Award in BIg Bay Bei: BBB 2022
- Gold Award in Hong Kong International Science Olympiad: HKISO 2022

PROGRAMMING/ SKILLS

- *Programming Language:* C, C++, Python, Java, JavaScript, C#
- **ML,Deep Learning, Data-Sci:** Numpy, Pandas, Matplotlib, R, Scikit-learn, YoloV8, OpenCV, Pytorch, RAG, Finetuning
- **Software Engineer:** HTML, CSS, Node JS, Express, React JS, Next JS, SQL
- **Others:** Git, Blender, Unity, Agile Development
- **Language:** English(Fluent), Cantonese(Beginner), Mandarin(Beginner)