

ADARSH ROUNIYAR

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OBJECTIVE

AI Engineer with expertise in **deep learning, federated learning, and blockchain systems**. Experienced in **Docker/K8S, web application development, and large-scale AI deployments**. Seeking to build intelligent platforms and production-ready AI systems in Taiwan's high-tech industry.

EXPERIENCE

Chief Technology Officer & AI Software Engineer

Apr 2024 – Present

Whale Strategy Co., Ltd., Kaohsiung, Taiwan

- **Independently developed and deployed the company's official website** using WordPress: whalestrategy.net.
- Designed and deployed verified **smart contracts** on **X Layer and BSC**, powering wstaking.net (**X Layer Contract, BSC Contract**) with **234K+ USDT staked**.
- Leading development of a **global staking platform** for India, Indonesia, and other markets.
- Built algorithmic trading bots using **Python, OKX API, TradingView**; applied ML techniques for forecasting and anomaly detection.
- Developed an **LLM-powered chatbot** for cryptocurrency insights and predictions.
- GitHub: [Strategies Repo](#), [WStaking GitHub Page](#).

AI Research Assistant & Project Assistant

Nov 2021 – May 2024

National Chung Cheng University (CCU), Minxiong & Chiayi, Taiwan

- **AI Research Assistant** (Nov 2021 – May 2024): Researched federated learning, trustworthy AI, and sustainable smart cities; implemented CNNs, adversarial training, and distributed systems in TensorFlow & PyTorch; mentored interns and authored research reports.
- Published and presented multiple papers on federated learning, AQI estimation, and smart-city architectures (IEEE ISC2, ACM GoodIT, Future Internet).
- **Project Assistant** (Aug 2023 – May 2024): Contributed to the [NSTC-CCU Trustworthy AI Smart City Project](#), coordinating with IIT Ropar, Chitkara University, Chandigarh Government, India, and Global Fishing Watch, Taiwan.

PROJECTS

Company Website (Whale Strategy). Independently designed and deployed the corporate website using WordPress, including integrations for branding, client onboarding, and technical content. whalestrategy.net

Smart-Contract Staking Platform. Verified smart contracts on **X Layer & BSC**, integrated into wstaking.net with **234K+ USDT staked**.

Automated Trading Bot. Python bots using OKX API & TradingView; deployed with Docker for real-time execution. ([GitHub](#))

AI-Powered Chatbot. Designed and implemented an LLM-based crypto chatbot for queries, insights, and predictions; **currently in testing phase**; deployment planned after validation.

Eff-AQI (Federated Learning). CNN-based AQI classification, published in ACM GoodIT. Dataset: [GitHub](#), [Kaggle DOI](#).

SKILLS

- **AI/ML:** Deep Learning (CNNs), Federated Learning, NLP, RAG, Model Aggregation
- **Programming:** Python, Rust, TensorFlow, PyTorch, Keras
- **System Infrastructure:** Docker, Kubernetes (K8S), Linux, Cloud Platforms (GCP, Colab)
- **Web & Development:** WordPress, Web Applications, TradingView/Pine Script, API Integration (Crypto Exchanges, REST APIs)
- **Tools:** Git, VS Code, JupyterHub, Google Colab
- **Soft Skills:** Leadership, Mentoring, Technical Communication, Problem Solving

EDUCATION

M.Sc. Computer Science and Information Engineering, National Chung Cheng University, Taiwan Sep 2021 – Aug 2023

Thesis: Performance-Based Model Aggregation in Federated Learning for Image-Based AQI Classification.

GPA: 4.11/4.3

B.Tech. Computer Science and Engineering, Vel Tech University, India 2017 – 2021

CGPA: 8.3/10

Thesis: Web Application for Online OPD Appointment and Hospital Information System

PUBLICATIONS

Peer-Reviewed Publications

- J. Ayelayen, S. Utomo, **A. Rouniyar**, H.-C. Hsu, P.-A. Hsiung. *Federated Learning Design and Functional Models: Survey*. Artificial Intelligence Review 58:21. **Published: 16 Nov 2024.** [DOI](#)
- S. Utomo, **A. Rouniyar**, H.-C. Hsu, P.-A. Hsiung. *Federated Adversarial Training Strategies for Achieving Privacy and Security in Sustainable Smart City Applications*. Future Internet 15(11):371. **Published: 20 Nov 2023.** [DOI](#)
- S. Utomo, **A. Rouniyar**, G.-H. Jiang, C.-H. Chang, K.-C. Tang, H.-C. Hsu, P.-A. Hsiung. *Eff-AQI: An Efficient CNN-Based Model for Air Pollution Estimation: A Study Case in India*. ACM GoodIT '23, pp.165–172. **Published: 06 Sep 2023.** [DOI](#)
- S. Utomo, A. John, **A. Rouniyar**, H.-C. Hsu, P.-A. Hsiung. *Federated Trustworthy AI Architecture for Smart Cities*. IEEE International Smart Cities Conference (ISC2). **Published: 26 Oct 2022.** [DOI](#)

Dataset

- **A. Rouniyar**, S. Utomo, A. John, P.-A. Hsiung. *Air Pollution Image Dataset from India and Nepal*. Kaggle. **Published: 2023.** [DOI](#) [Kaggle](#) [GitHub](#)

IEEE Smart Cities Newsletter (2023)

- *Green Federated Learning: Optimized Communication Costs for Smart City Applications.* [Newsletter](#)
- *Trustworthy AI and Federated Learning for Sustainable Smart Cities.* [Newsletter](#)

Under Review

- **FLEX-DETECT: Federated Learning for Enhanced Vehicle Detection in Data Heterogeneity with Explainable AI (XAI).** Information Processing and Management (Elsevier). Manuscript ID: IPM-D-25-03335.

LEADERSHIP & EXTRAS

- Built engineering processes at Whale Strategy; coached interns and junior engineers.
- Languages: English, Hindi, Nepali; Mandarin (basic).