

Volta Digital Energy Technology Limited - Research Assistant – Battery Analytics & AI Modeling

Company Name: Volta Digital Energy Technology Limited

Position: Research Assistant – Battery Analytics & AI Modeling

Posting Date: 7 Sep 2026

Job Advertisement / 招聘廣告

Job Title / 職位名稱: Research Assistant – Battery Analytics & AI Modeling (研發助理 – 電池數據分析與 AI 建模)

Company Name: Volta Digital Energy Technology Limited (伏達數字能源科技有限公司)

Employment Type: Full-time

Industry: Artificial Intelligence / Green Technology / Energy Storage & New Energy Vehicles

Monthly Salary: HK\$14,000 – HK\$18,000 per month (plus discretionary performance bonus)

About Volta Digital Energy / 關於伏達數字能源

Volta Digital Energy Technology Limited is an approved incubatee under the **Hong Kong-Shenzhen Innovation and Technology Park (HSITPL) Incubation Support Programme**. Focusing on full-lifecycle battery asset health and digital energy risk management, Volta pioneers physics-informed AI modeling (P2D electrochemical model and Volta-Guard AI Battery Knowledge Graph) and microsecond pulse rejuvenation. We provide zero-retrofit diagnostic solutions (DaaS), InsurTech risk quantification (UnderwriteAI™), and energy storage digital asset bankability infrastructure across Hong Kong, Mainland China, and international markets.

Key Responsibilities / 主要工作職責

1. Battery Time-Series Data Preprocessing & Feature Engineering:

- - Collect dynamic operational time-series data (voltage, current, temperature) from pilot

- EV charging networks and energy storage systems;
- - Conduct millivolt-level (mV) micro-voltage curve cleaning, filtering, and statistical feature extraction to support P2D electrochemical model parameter inversion

2. AI Modeling & Battery Knowledge Graph Maintenance

- Assist in the maintenance and optimization of the *Volta-Guard* engine and structural "fault-phenomenon-mechanism" knowledge graph;
- Implement statistical learning, Gaussian Processes, and uncertainty quantification methods to train battery State of Health (SOH) and Remaining Useful Life (RUL) estimation models;
- Support early identification of battery "sub-health" degradation states (e.g., lithium dendrite formation, internal micro-short circuits) for multi-week advance risk warning

3. HSITPL Incubation Project & Compliance Documentation

- Execute technical deliverables and data analysis tasks under the HSITPL Incubation Support Programme and accelerator milestones;
- Assist in formatting technical testing protocols aligned with international battery second-life standards (UL 1974:2023 Annex D) and national standards (GB/T) to generate standard digital battery health reports

4. Energy Tech & FinTech Integration

- Assist in interfacing battery health profile datasets with downstream insurance dynamic pricing models (*UnderwriteAI*TM) and energy storage on-chain data verification frameworks.

Requirements & Qualifications / 入職資格

Education

- Bachelor's degree or above (Master's / Ph.D. candidate preferred) in a **STEM discipline** (Data Science, Computer Science, Information Engineering, Electrical Engineering, Applied Mathematics, Physics, Energy Systems, or related fields)

Technical Skills

- Proficiency in Python, R, or MATLAB for big data analytics, numerical simulation, and machine learning/deep learning workflows;
- Sound understanding of time-series analysis, Gaussian Process regression, optimization methods, or battery degradation mechanisms;
- Familiarity with electrochemical impedance spectroscopy (EIS), battery charging curves, or BMS telemetry data is a strong advantage;

- Experience in blockchain data analytics, DeFi/Web3 smart contracts, or InsurTech modeling is a plus

Competencies:

- Strong research, problem-solving, and algorithmic implementation capabilities;
- High proficiency in written and spoken English and Chinese (Cantonese and/or Putonghua)

Compensation & Benefits / 薪酬與福利

Monthly Base Salary: HK\$14,000 – HK\$18,000 (negotiable commensurate with qualifications)

Incentives: Discretionary Performance Bonus based on R&D project achievements

Leave Entitlement: 15 working days paid annual leave, plus Hong Kong statutory holidays

Working Hours: Monday to Friday, 9:00 a.m. – 6:00 p.m.

How to Apply / 申請方式

Interested candidates should submit a full resume, academic transcripts, and relevant information to: **admin@volta-hk.com**