

Jimmy Ding

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Selected Projects

Offline Signature Verification | [GitHub](#) | [Write-Up](#) | [Demo](#) Oct 2025 – Jun 2026

- Built a PyTorch deep metric learning pipeline for **writer-independent** offline signature verification on CEDAR, achieving **0.9284 ROC-AUC** on skilled forgery detection.
- Applied transfer learning with **EfficientNetV2** and **signer-aware batch sampling** to improve embedding quality with limited per-writer signature samples.
- Designed and evaluated L_{SC+} , a custom metric-learning loss that improves separation between genuine and forged signatures while preserving intra-class signature variation.

mediadl – Cross-Platform Media Archiving CLI | [GitHub](#) | [Releases](#) Jun 2026

- Built a Rust CLI supporting **3 media workflows** (audio, video, and CSV batch downloads) with structured creator and collection-based output through yt-dlp and FFmpeg.
- Designed a modular **2-crate Cargo workspace** with **10 configurable options** for media formats, quality, output templates, thumbnails, retries, and parallel downloads.
- Automated GitHub Actions builds and release packaging for **4 platform targets** across Linux, Windows, and macOS.

Experience

AI Systems Research and Development Intern (Full-Time) | [OpenSys \(M\) Berhad](#) Oct 2024 – Jan 2025

- Prototyped **AI components** for internal workflow automation, comparing commercial APIs with open-source alternatives across reliability, output quality, and deployment feasibility.
- Designed **structured test cases and error-analysis reports** to identify model failure modes in production-like scenarios.
- Integrated selected AI components into existing **internal workflows**, supporting testing, validation, and deployment handoff.

Competitions & Hackathons

Applied LLM Engineering | [Cursor X Anthropic Hackathon](#) | [Monash University](#) | Malaysia Dec 2025

- Built an **LLM-powered** budget journal that analyses spending patterns and user reflections to generate **personalised financial insights**.
- Designed a privacy-first workflow for combining transaction context with natural-language journal entries.

Cryptocurrency Prediction Model | [UMHackathon](#) | [University of Malaya](#) | Malaysia Apr 2025

- Built a forecasting pipeline combining **LSTM-based price prediction**, **VADER news sentiment analysis**, and **Hidden Markov Models** for market-regime detection.

Fraud Detection and Prevention Plugin | [Hack Attack](#) | [Universiti Tunku Abdul Rahman](#) | Malaysia Aug 2024

- Built a browser plugin leveraging **web scraping**, a **custom sentiment classification model**, and **Alibaba Cloud database services** to aggregate and summarise product reviews in real-time.

Education

Bachelor of Computer Science (Honours) | [Universiti Tunku Abdul Rahman](#) | Malaysia May 2023 – Jun 2026

- **CGPA:** 3.96/4.00
- **Scholarships & Awards:** Top Achiever 100% Scholarship | China Ambassador Scholarship | President's List Awards.

Certificates

- **Purdue University Online** | [Machine Learning in Action: Tools, Techniques, and Industrial Cases](#) Mar 2026
- **Purdue University Online** | [Data Analytics for Decision Makers](#) Mar 2026
- **AWS Academy Cloud Foundations** | [AWS Academy Graduate](#) Jul 2025

Skills

- **AI/ML:** PyTorch | OpenCV | scikit-learn | NumPy | pandas | TensorBoard | Streamlit | Cursor | Claude Code
- **Programming Languages:** Python | Rust | C++ | Java | Lua | SQL | JavaScript | HTML | CSS
- **Databases:** Microsoft Access | MySQL | PostgreSQL | MongoDB
- **Cloud, Infrastructure, DevOps:** AWS | Alibaba Cloud | Git | CI/CD | Docker | Nginx | Linux